

# Radio Amateur **CALLBOOK** Magazine

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**UNITED STATES LISTINGS**

ALL K AND W CALLS

**FALL 1961**

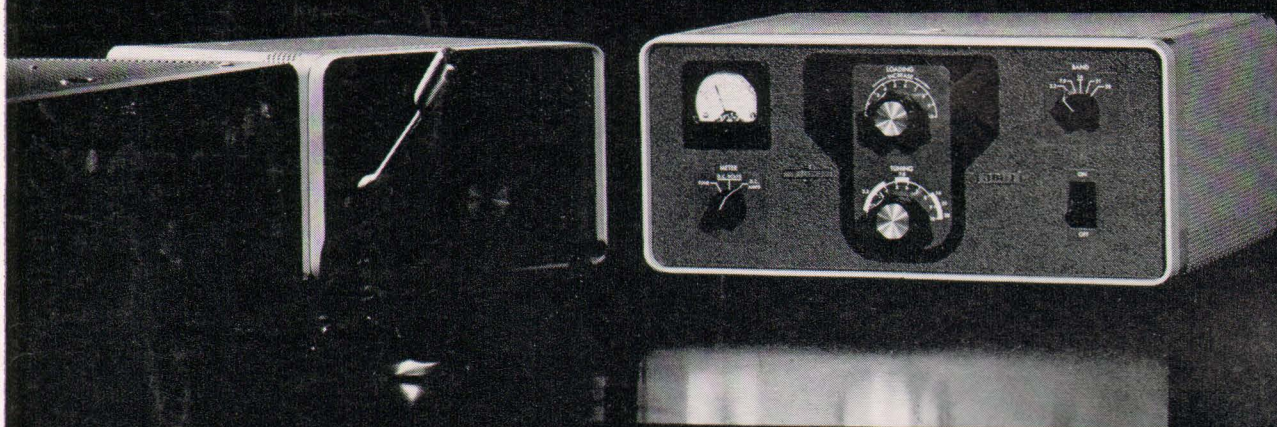
CURRENT UNTIL THE NEXT ISSUE, DECEMBER 1961

**IN THIS ISSUE**

{ 14,907 NEW LICENSES ISSUED BY FCC SINCE THE SUMMER 1961 CALLBOOK  
OVER 23,000 CHANGES IN PREVIOUS LISTINGS  
OVER 231,000 LICENSED RADIO AMATEURS

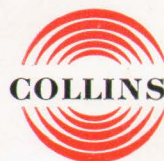


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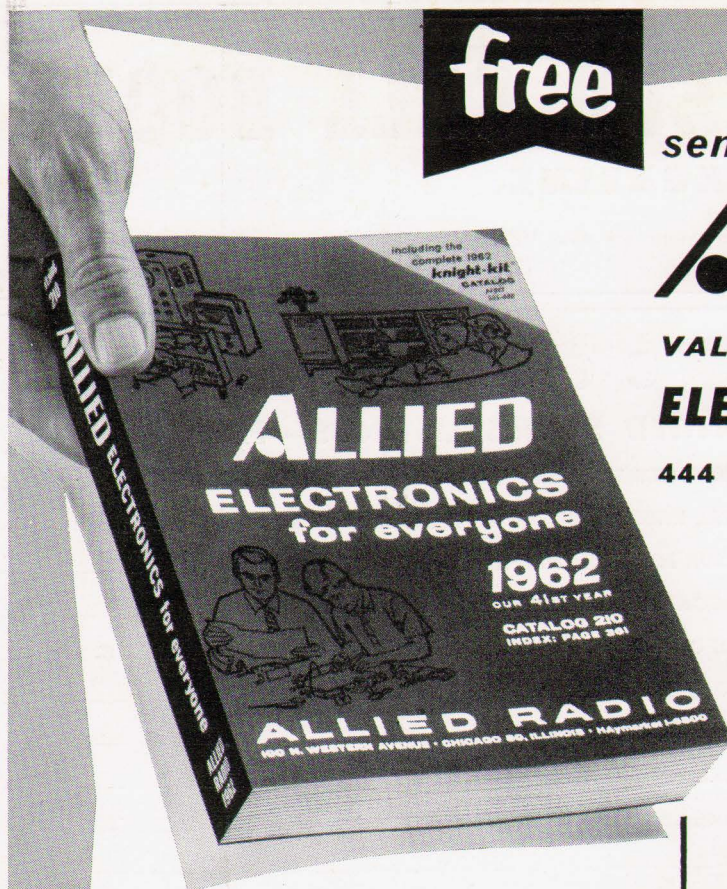
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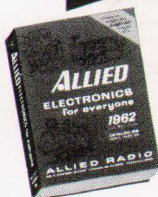
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# RADIO AMATEUR CALL BOOK

## MAGAZINE

known the world over as the "CALLBOOK"

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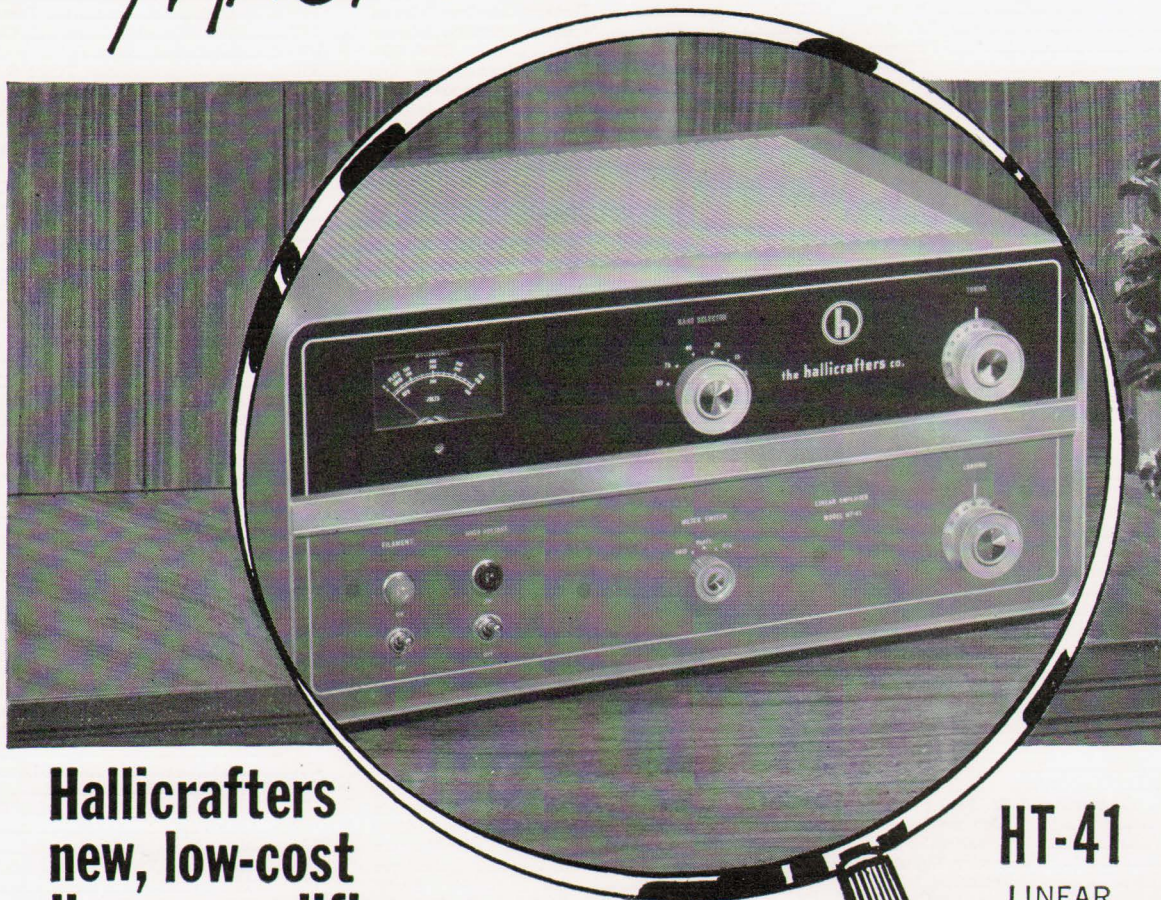
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# A. R. R. L. COUNTRIES LIST

## Official List for ARRL DX CONTEST and Postwar DXCC

The ARRL Postwar Countries List is the official standard used in connection with the ARRL DX competition and the DX Century Club. To qualify for the DX Century Club Award, an applicant must submit confirmations from at least 100 different countries contacted after November 15, 1945, in accordance with the Postwar DXCC Rules. Copies of the DXCC Rules will be furnished by ARRL on request.

AC3	Sikkim	KC4	(See CE9)	VP2	St. Vincent & Dependencies
AC4	Tibet	KC4	Navassa Island	VP3	British Guiana
AC5	Bhutan	KC6	Eastern Caroline Islands	VP4	Trinidad & Tobago
AP	Pakistan	KC6	Western Caroline Islands	VP5	Cayman Islands
BV	Formosa	KG1	(See OX)	VP5	Jamaica
BY	China	KG4	Guantanamo Bay	VP5	Turks & Caicos Islands
C9	Manchuria	KG6	Marcus Island	VP6	Barbados
CE	Chile	KG6	Mariana Islands	VP7	Bahama Islands
CE9AA-AM, KC4, LU-Z, VKφ, VP8, ZL5	Antarctica	KG6I	(See KAφ)	VP8	(See CE9)
CE9	(See VP8)	KH6	Hawaiian Islands	VP8	Falkland Islands
CEφA	Easter Island	KJ6	Johnston Island	VP8, LU-Z	South Georgia Islands
CEφZ	Juan Fernandez Archipelago	KM6	Midway Islands	VP8, LU-Z	South Orkney Islands
CM, CO	Cuba	KP4	Puerto Rico	VP8, LU-Z	South Sandwich Islands
CN2, CN8, CN9	Morocco	KP6	Palmyra Group, Jarvis Island	VP8, LU-Z, CE9AN-AZ	South Shetland Islands
CP	Bolivia	KR6	Ryukyu Islands	VP9	Bermuda Islands
CR4	Cape Verde Islands	KS4	Serrana Bank & Roncador Cay	VQ1	Zanzibar
CR5	Portuguese Guinea	KS4	Swan Islands	VQ2	Northern Rhodesia
CR5	Principe, Sao Thome	KS6	American Samoa	VQ3	Tanganyika Territory
CR6	Angola	KV4	Virgin Islands	VQ4	Kenya
CR7	Mozambique	KW6	Wake Island	VQ5	Uganda
CR8	Goa (Portuguese India)	KX5	Marshall Islands	VQ8	Cargadas Carajos
CR9	Macao	KZ5	Canal Zone	VQ8	Chagos Islands
CR10	Portuguese Timor	LA	Jan Mayen	VQ8	Mauritius
CT1	Portugal	LA	Norway	VQ8	Rodriguez Island
CT2	Azores	LA	Svalbard	VQ9	Seychelles
CT3	Madeira Islands	LU	Argentina	VR1	British Phoenix Islands
CX	Uruguay	LU-Z	(See CE9)	VR1	Gilbert & Ellice Islands & Ocean Island
DJ, DL, DM	Germany	LX	Luxembourg	VR2	Fiji Islands
DU	Philippine Islands	LZ	Bulgaria	VR3	Fanning & Christmas Islands
EA	Spain	M1	San Marino	VR4	Solomon Islands
EA6	Balearic Islands	MP4	Bahrein	VR5	Tonga Islands
EA8	Canary Islands	MP4	Qatar	VR6	Pitcairn Island
EA9	Ifni	MP4	Trucial Oman	VS1	Singapore
EA9	Rio de Oro	OA	Peru	VS4	Sarawak
EA9	Spanish Morocco	OD5	Lebanon	VS5	Brunei
EAφ	Spanish Guinea	OE	Austria	VS6	Hong Kong
EI	Republic of Ireland	OH	Finland	VS9	Aden & Socotra
EL	Liberia	OHφ	Aland Islands	VS9	Maldives Islands
EP, EQ	Iran	OK	Czechoslovakia	VS9	Sultanate of Oman
ET2	Eritrea	ON4	Belgium	VU	Andaman and Nicobar Islands
ET3	Ethiopia	OX, KG1	Greenland	VU	India
F	France	OY	Faeroes	VU	Laccadive Islands
FA	Algeria	OZ	Denmark	XE, XF	Mexico
FB8	Amsterdam & St. Paul Islands	PAφ, P11	Netherlands	XE4	Revilla Gigedo
FB8	Comoro Islands	PJ	Netherlands West Indies	XZ2	Burma
FB8	Kerguelen Islands	PJ2M	Sint Maarten	YA	Afghanistan
FB8	Malagasy Republic	PX	Andorra	YL	Iraq
FB8	Tromelin Island	PY	Brazil	YJ	(See FJ8)
FC (Unofficial)	Corsica	PYφ	Fernando de Noronha	YK	Syria
FD	Togo	PYφ	Trindade & Martim Vaz Islands	YN, YNφ	Nicaragua
FE8	Cameroon	PZ1	Netherlands Guiana	YO	Roumania
FF	Dahomey Republic	SL, SM	Sweden	YS	Salvador
FF	Mali Republic	SP	Poland	YU	Yugoslavia
FF	Niger Republic	ST2	Sudan	YV	Venezuela
FF	Senegal Republic	SU	Egypt	YVφ	Aves Island
FF	Voltaic Republic	SV	Crete	ZA	Albania
FF4	Ivory Coast	SV	Dodecanese	ZB1	Malta
FF7	Mauritania	SV	Greece	ZB2	Gibraltar
FG7	Guadeloupe	TA	Turkey	ZC4	Cyprus
FK8	New Caledonia	TF	Iceland	ZC5	British North Borneo
FL8	French Somaliland	TG	Guatemala	ZC6	Palestine
FM7	Martinique	TI	Costa Rica	ZD1	Sierra Leone
FO8	Clipperton Island	TI9	Cocos Island	ZD2	Nigeria
FO8	French Oceania	UA1-6, UN1	Socialist Federated Soviet Republic	ZD3	Gambia
FP8	St. Pierre & Miquelon Islands	UA1	Franz Josef Land	ZD6	Nyasaland
FQ	Central African Rep.	UA2	Kaliningradsk	ZD7	St. Helena
FQ	Chad Republic	UA9, φ	Asiatic Russian S.F.S.R.	ZD8	Ascension Island
FQ	Congo Republic	UB5	Ukraine	ZD9	Tristan da Cunha & Gough Island
FR7	Reunion Island	UC2	White Russian Soviet Socialist Republic	ZE	Southern Rhodesia
FS7	Saint Martin	UD6	Azerbaijan	ZK1	Cook Islands
FU8, YJ1	New Hebrides	UF6	Georgia	ZK1	Manihiki Islands
FW8	Wallis & Futuna Islands	UG6	Armenia	ZK2	Niue
FY7	French Guiana & Inini	UH8	Turkoman	ZL	Auckland & Campbell Islands
G	England	UI8	Uzbek	ZL	Chatham Islands
GC	Channel Islands	UJ8	Tadzhik	ZL	Kermadec Islands
GD	Isle of Man	UL7	Kazakh	ZL	New Zealand
GI	Northern Ireland	UM8	Kirghiz	ZL5	(See CE9)
GM	Scotland	UC5	Moldavia	ZM6	British Samoa
GW	Wales	UP2	Lithuania	ZM7	Tokelau
HA	Hungary	UQ2	Latvia	ZP	Paraguay
HB	Switzerland	UR2	Estonia	ZS1, 2, 4, 5, 6	Union of South Africa
HC	Ecuador	VK	Australia (including Tasmania)	ZS2	Prince Edward & Marion Islands
HC8	Galapagos Islands	VK	Lord Howe Island	ZS3	Southwest Africa
HE	Liechtenstein	VK	Willis Islands	ZS7	Swaziland
HH	Haiti	VK9	Christmas Island	ZS8	Basutoland
HI	Dominican Republic	VK9	Cocos Islands	ZS9	Bechuanaland
HK	Colombia	VK9	Nauru Island	3A	Monaco
HKφ	San Andres and Providencia	VK9	Norfolk Island	3V8	Tunisia
HM, HL9	Korea	VK9	Papua Territory	4S7	Ceylon
HP	Panama	VK9	Territory of New Guinea	4W1	Yemen
HR	Honduras	VKφ	(See CE9)	4X4	Israel
HS	Thailand	VKφ	Heard Island	5A	Libya
HV	Vatican City	VKφ	Macquarie Island	6O2	Somali Republic
HZ	Saudi Arabia (Hedjaz & Nejd)	VP1	British Honduras	7G1	Republic of Guinea
II, IT1	Italy	VP2	Anguilla	9G1	Ghana
IS1	Sardinia	VP2	Antigua, Barbuda	9K2	Kuwait
JA, KA	Japan	VP2	British Virgin Islands	9M2	Malaya
IT1	Mongolia	VP2	Dominica	9N1	Nepal
IY	Jordan	VP2	Grenada & Dependencies	9Q5	Republic of the Congo
JZφ	Netherlands New Guinea	VP2	Montserrat	9U5	Ruanda-Urundi
KA	(See JA)	VP2	St. Kitts, Nevis		Aldebra Islands
KAφ, KG6I	Bonin & Volcano Islands	VP2	St. Lucia		
KB6	Baker, Howland & American Phoenix Islands				



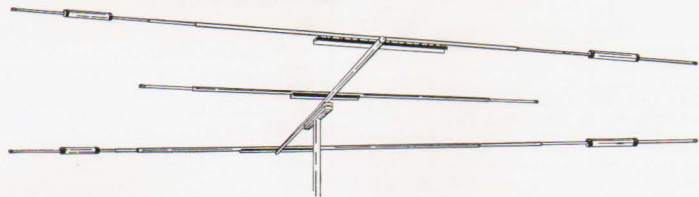
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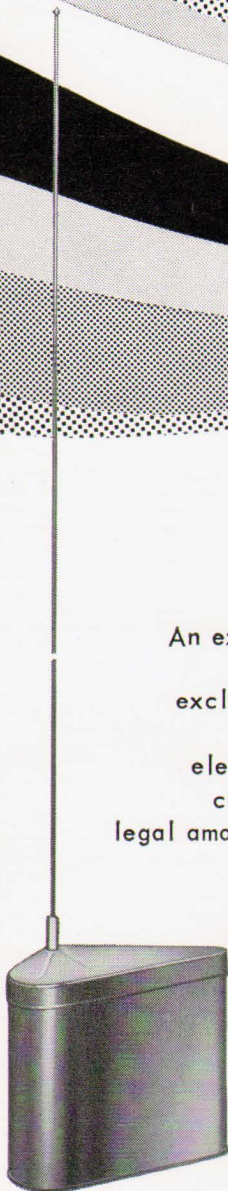
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# INTERNATIONAL RADIO AMATEUR PREFIXES

The following prefixes are listed in alphabetical order for convenience in locating the country when DX calls are heard.

AC3	SIKKIM	KB6	BAKER, CANTON, ENDERBURY, HOWLAND & PHOENIX ISLANDS	VO1	NEWFOUNDLAND
AC4	TIBET	KC4	NAVASSA IS.	VO2	LABRADOR
AC5	BHUTAN	KC4US	ANTARCTICA	VP1	BRITISH HONDURAS
AP	PAKISTAN	KC6	CAROLINE ISLANDS	VP2	FEDERATION OF BRITISH TERRITORIES IN THE CARIBBEAN
BV	FORMOSA	KG1	U. S. PERSONNEL IN GREENLAND	VP3	BRITISH GUIANA
BY, (C)	CHINA	KG4	GUANTANAMO BAY, CUBA	VP4	TRINIDAD & TOBAGO IS.
C9	MANCHURIA	KG6	MARIANAS ISLANDS (Guam)	VP5	JAMAICA, CAYMAN, TURKS & CAICOS IS.
CE	CHILE	KG6I	VOLCANO ISLAND	VP6	BARBADOS
CEφA	EASTER ISLAND	KG6S	SAIPAN ISLAND	VP7	BAHAMA ISLANDS
CEφZ	JUAN FERNANDEZ IS.	KG6T	TINIAN ISLAND	VP8	FALKLAND ISLANDS South Georgia, South Orkney, South Sandwich and South Shetland Is.
CM-CO	CUBA	KH6	HAWAIIAN ISLANDS	VP9	BERMUDA ISLANDS
CN	MOROCCO	KJ6	JOHNSTON ISLAND	VQ1	ZANZIBAR
CN9	MOROCCO (Zona Norte)	KL7	ALASKA	VQ2	NORTHERN RHODESIA
CP	BOLIVIA	KM6	MIDWAY ISLAND	VQ3	TANGANYIKA
CR4	CAPE VERDE ISLANDS	KP4	PUERTO RICO	VQ4	KENYA
CR5	PORTUGUESE GUINEA	KR6, KR8	PALMYRA & JARVIS IS.	VQ5	UGANDA
CR6	ANGOLA	KS4	RYUKYU IS. (Okinawa)	VQ9	CHAGOS, MAURITIUS & RODRIGUEZ IS.
CR7	MOZAMBIQUE	KS4B	SWAN ISLAND	VQ9	SEYCHELLES
CR8	GOA (Portuguese India)	KS6	SERRANA BANK & RONCADOR CAY	VR1	GILBERT, ELLICE & OCEAN ISLANDS
CR9	MACAO	KV4	U. S. SAMOA	VR2	FIJI ISLANDS
CR10	TIMOR ISLAND (Port.)	KW6	VIRGIN ISLANDS	VR3	LINE ISLANDS
CT1	PORTUGAL	KX6	WAKE ISLAND	VR4	SOLOMON ISLANDS
CT2	AZORES ISLANDS	KZ5	MARSHALL ISLANDS	VR5	TONGA (Friendly) ISLAND
CT3	MADEIRA ISLANDS	LA	CANAL ZONE	VR6	PITCAIRN ISLAND
CX	URUGUAY	LU	NORWAY, SVALBARD, JAN MAYEN IS.	VS1	SINGAPORE
DJ, DL	WEST GERMAN FEDERAL REP.	LX	ARGENTINA	VS4	SARAWAK
DM	EAST GERMAN DEMOCRATIC REP.	LZ	LUXEMBOURG	VS5	BRUNEI
DU	PHILIPPINE ISLANDS	M1	BULGARIA	VS6	HONG KONG
EA	SPAIN	MP4	SAN MARINO	VS9	ADEN, SOCOTRA, KAMARAN & MALDIVE IS.
EA6	BALEARIC ISLANDS	OA	BAHREIN IS., DAS IS., MASQUAT & OMAN, QATAR, TRUCIAL OMAN	VU	INDIA
EA8	CANARY ISLANDS	OD5	PERU	VU4	LACCADIVE ISLANDS
EA9	SPANISH SAHARA, IFNI, RIO DE ORO	OE	LEBANON	VU5	ANDAMAN & NICOBAR IS.
EAφ	SPANISH GUINEA, RIO MUNI	OH	AUSTRIA	W	UNITED STATES
EI	IRELAND	OHφ	FINLAND	XE	MEXICO
EL	LIBERIA	OK	ALAND ISLANDS	XE4	REVILLA GIGEDO IS.
EP, EQ	IRAN	ON	CZECHOSLOVAKIA	XW8	LAOS
ET2	ERITREA	OX	BELGIUM	XZ	BURMA
ET3	ETHIOPIA	OY	GREENLAND	YA	AFGHANISTAN
F	FRANCE	OZ	FAEROES IS.	YI	IRAQ
FA	ALGERIA	PA, PI	DENMARK	YJ	NEW HEBRIDES
FB8	AUSTRAL and ANTARCTIC FRENCH LANDS, Amsterdam, St. Paul and Kerguelen Is.	PJ	NETHERLANDS	YK	SYRIA
FC	CORSICA	PJ2M	NETHERLANDS ANTILLES	YN	NICARAGUA
FD8	TOGO	PK	SINT MAARTEN	YO	RUMANIA
FE8	CAMEROUN	PX	INDONESIA	YS	EL SALVADOR
FF5	DAHOMY	PY	ANDORRA	YT, YU	YUGOSLAVIA
FF6	UPPER VOLTA	PYφ	BRAZIL	YV	VENEZUELA
FF8	MALI REPUBLIC	PZ	TRINIDADE & MARTIN VAZ IS. & FERNANDO DE NORONHA IS.	ZA	ALBANIA
FG7	GUADELOUPE	SL, SM	SURINAM (Netherlands Guiana)	ZB1	MALTA
FG8	COMORO ISLANDS	ST	SWEDEN	ZB2	GIBRALTAR
FK8	NEW CALEDONIA	SP	POLAND	ZC4	CYPRUS
FL8	FRENCH SOMALILAND	ST	SUDAN	ZC5	BRITISH NORTH BORNEO
FM7	MARTINIQUE	SU	EGYPT	ZD1	SIERRA LEONE
FO8	FRENCH OCEANIA, CLIPPERTON IS.	SV	CRETE & GREECE	ZD3	GAMBIA
FP8	MIQUELON & ST. PIERRE IS.	SV5	DODECANESE ISLANDS	ZD6	NYASALAND
FR7	REUNION ISLAND	TA	TURKEY	ZD7	SAINT HELENA
FS7	SAINT MARTIN	TG	ICELAND	ZD8	ASCENSION ISLAND
FU8	NEW HEBRIDES	TI	GUATEMALA	ZD9	TRISTAN DA CUNHA & GOUGH ISLANDS
FW8	WALLIS & FUTUNA ISLANDS	TL8	COSTA RICA	ZE	SOUTHERN RHODESIA
FY7	FRENCH GUIANA	TN8	COCOS ISLAND	ZK1	COOK ISLANDS
G	ENGLAND	TR8	CENTRAL AFRICAN REP.	ZK2	NIUE
GC	CHANNEL ISLANDS	TT8	REPUBLIC OF CONGO	ZL	NEW ZEALAND
GD	ISLE OF MAN	TU2	GABON REPUBLIC	ZL1	KERMADEC
GI	NORTHERN IRELAND	UA1-3-4-6	TCHAD REPUBLIC	ZM	WESTERN SAMOA
GM	SCOTLAND	UA9-φ	IVORY COAST	ZP	PARAGUAY
GW	WALES	UB5	EUROPEAN RUSSIAN SOCIALIST FEDERATED SOVIET REPUBLIC	ZS	UNION OF SOUTH AFRICA
HA	HUNGARY	UC2	ASIATIC RUSSIAN S. F. S. R.	ZS2	PRINCE EDWARD & MARION IS.
HB	SWITZERLAND	UD6	UKRAINE	ZS3	SOUTHWEST AFRICA
HC	ECUADOR	UF6	WHITE RUSSIAN S.S.R.	ZS7	SWAZILAND
HC8	GALAPAGOS ISLANDS	UG6	GEORGIA	ZS8	BASUTOLAND
HE9L	LIECHTENSTEIN	UH8	ARMENIA	ZS9	BECHUANALAND
HH	HAITI	UI8	TURKMEN	3A2	MONACO
HI	DOMINICAN REPUBLIC	UJ8	UZBEK	3V8	TUNISIA
HK	COLOMBIA	UL7	TADZHIK	3W8	VIETNAM
HKφ	SAN ANDRES & PROVIDENCIA	UM8	KAZAKH	4S7	CEYLON
HM, HL9	KOREA	UN1	KIRGHIZ	4W1	YEMEN
HP	PANAMA	UO5	KARELO-FINNISH REPUBLIC	4X4	ISRAEL
HR	HONDURAS	UP	MOLDAVIA	5A	LIBYA
HS	THAILAND	UQ	LITHUANIA	5N2	NIGERIA
HV	VATICAN CITY	UR	LATVIA	5R8	MALAGASY REP. (Madagascar), Tromelin Is.
HZ	SAUDI ARABIA	VE	ESTONIA	5T5	MAURITANIA
I	ITALY	VK	CANADA	5U7	NIGER
IS	SARDINIA	VK2	AUSTRALIA	6O	SOMALI REPUBLIC
IT	SICILY	VK7	LORD HOWE ISLAND	6W8	SENEGAL
JA	JAPAN	VK9	TASMANIA	7G1	REPUBLIC OF GUINEA
JT1	MONGOLIA	VKφ	NEW GUINEA, PAPUA, NORFOLK, NAURU, CHRISTMAS & COCOS-KEELING IS.	9G1	GHANA
JY	JORDAN			9K2	KUWAIT
JZφ	NETHERLANDS NEW GUINEA			9M2	FEDERATION OF MALAYA
K	UNITED STATES			9N1	NEPAL
KA	U. S. PERSONNEL IN JAPAN			9Q5	REPUBLIC OF THE CONGO
				9U5	RUANDA-URUNDI



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S-108	13.00	6.50	<b>129.95</b>
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Cash Down	20 Monthly Payments
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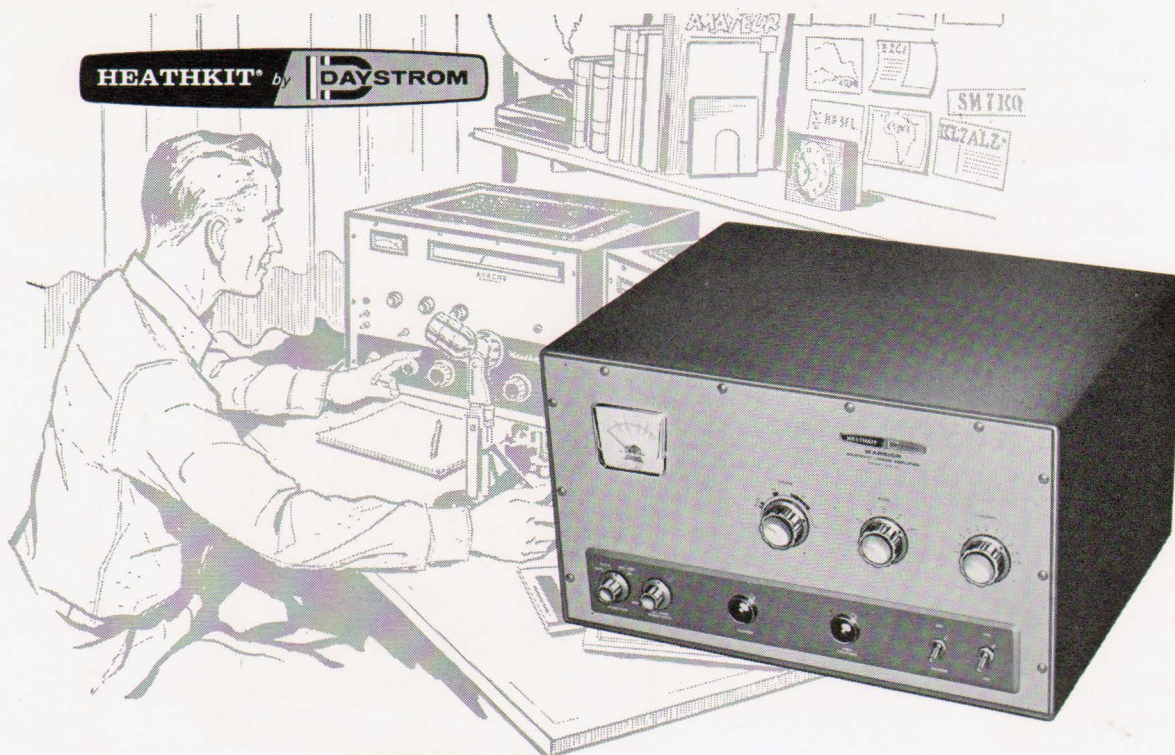


# PREFIXES—BY COUNTRIES

The following countries listed in alphabetical order by country show international radio amateur prefixes. Characters in ( ) designate the continent and zone in which the country is located. Abbreviations are as follows: A—Asia, AF—Africa, E—Europe, NA—North America, O—Oceania, SA—South America.

ADEN (A-21) VS9	GUATEMALA (NA-7) TG	REUNION ISLAND (AF-39) FR7
AFGHANISTAN (A-21) YA	GUIANA, BRITISH (SA-9) VP3	REVILLA GIGEDO (NA-6) XE4
ALAND ISLANDS (E-14) OH6	GUIANA, FRENCH (SA-9) FY7	RHODESIA, NORTHERN (AF-36) VQ2
ALASKA (NA-1) KL7	GUINEA, PORTUGUESE (AF-35) CR5	RHODESIA, SOUTHERN (AF-38) ZE
ALBANIA (E-15) ZA	GUINEA, REPUBLIC OF (AF-35) 7G1	RIO DE ORO (AF-33) EA9
ALGERIA (AF-33) FA	HAITI (NA-8) HH	RIO MUNI (AF-36) EA6
AMSTERDAM & ST. PAUL IS. (AF-39) FB8	HAWAIIAN ISLANDS (O-31) KH6	RODRIGUEZ ISLAND (AF-39) VQ8
ANDAMAN & NICOBAR IS. (A-26) VU5	HEARD ISLAND (O-39) VK6	RUANDA-URUNDI (AF-36) 9U5
ANDORRA (E-14) PX	HONDURAS (NA-7) HR	RUMANIA (E-20) YO
ANGOLA (AF-36) CR6	HONG KONG (A-24) VS6	RYUKYU ISLANDS (A-25) KR6, KR8
ANGUILLA (NA-8) VP2	HOWLAND ISLAND (O-31) KB6	SAINT HELENA (AF-36) ZD7
ANTARCTICA (SA-13) KC4US	HUNGARY (E-15) HA	SAINT KITTS, NEVIS (NA-8) VP2
ANTARCTICA (O-30) VK6	ICELAND (E-40) TF	SAINT LUCIA (NA-8) VP2
ANTIGUA, BARBUDA (NA-8) VP2	IFNI (AF-33) EA9	SAINT MARTIN (NA-8) FS7
ARGENTINA (SA-13) LU	INDIA (A-22) VU	SAINT PIERRE ISLAND (NA-5) FP8
ASCENSION ISLAND (AF-36) ZD8	INDONESIA (A-28) PK	SAINT VINCENT IS. (NA-8) VP2
AUSTRALIA (O-29 & 30) VK	IRAN (A-21) EP, EQ	SAIPAN ISLAND (O-27) KG6S
AUSTRIA (E-15) OE	IRAQ (A-21) YI	SAMOA (U.S.) (O-32) KS6
AZORES ISLANDS (E-14) CT2	IRELAND (E-14) EI	SAMOA (Western) (O-32) ZM
	ISLE OF MAN (E-14) GD	SAN ANDRES & PROVIDENCIA (NA-7) HK6
	ISRAEL (E-15) 4X4	SAN MARINO (E-15) M1
	ITALY (E-15) I	SARAWAK (O-28) VS4
	IVORY COAST (AF-35) TU2	SARDINIA (E-15) IS
		SAUDI ARABIA (A-21) HZ
BAHAMA ISLANDS (NA-8) VP7	JAMAICA (NA-8) VP5	SCOTLAND (E-14) GM
BAHRAIN ISLANDS (A-21) MP4	JAN MAYEN ISLAND (E-40) LA	SENEGAL (AF-35) 6W8
BAKER ISLAND (O-31) KB6	JAPAN (A-25) JA	
BALEARIC ISLANDS (E-14) EA6	JARVIS ISLAND (O-31) KP6	SERRANA BANK & RONCADOR CAY (NA-7) KS4B
BARBADOS (NA-8) VP6	JAVA (O-28) PK1-2-3	SEYCHELLES (AF-39) VQ9
BASUTOLAND (AF-38) ZS8	JOHNSTON ISLAND (O-31) KJ6	SICILY (E-15) IT
BECHUANALAND (AF-38) ZS9	JORDAN (A-20) JY	SIERRA LEONE (AF-35) ZD1
BELGIUM (E-14) ON	JUAN FERNANDEZ IS. (SA-12) CE6Z	SIKKIM (A-22) AC3
BERMUDA ISLANDS (NA-5) VP9	KAMARAN IS. (A-21) VS9	SINGAPORE (A-28) VS1
BHUTAN (A-22) AC5	KENYA (AF-37) VQ4	SINT MAARTEN (NA-8) PJ2M
BOLIVIA (SA-10) CP	KERGUELEN ISLANDS (AF-39) FB8	SOCOTRA ISLAND (A-37) VS9
BORNEO (O-28) PK5	KERMADEC ISLANDS (O-32) ZL1	SOLOMON ISLANDS (O-28) VR4
BRAZIL (SA-11) PY	KOREA (A-25) HM, HL9	SOMALI REPUBLIC (AF-37) 6O
BRITISH HONDURAS (NA-7) VP1	KUWAIT (A-21) 9K2	SOMALILAND, French (AF-37) FL8
BRITISH NORTH BORNEO (A-28) ZC5	LABRADOR (NA-2) VO2	SOUTH GEORGIA (SA-13) VP8
BRITISH PHOENIX ISLANDS (O-31) VR1	LACCADIVE ISLANDS (A-22) VU4	SOUTH ORKNEY ISLANDS (SA-13) VP8
BRITISH TERRITORIES IN THE CARIBBEAN, FED. OF (NA-8) VP2	LAOS (A-26) XW8	SOUTH SANDWICH ISLANDS (SA-13) VP8
BRITISH VIRGIN ISLANDS (NA-8) VP2	LEBANON REPUBLIC (A-20) OD5	SOUTH SHETLAND ISLANDS (SA-13) VP8
BRUNEI (O-28) VS5	LIBERIA (AF-35) EL	SOUTHWEST AFRICA (AF-38) ZS3
BULGARIA (E-20) LZ	LIBYA (AF-34) 5A	SOVIET UNION:
BURMA (A-26) XZ	LIECHTENSTEIN (E-14) HE9L	EUROPEAN RUSSIAN SOCIALIST FEDERATED SOVIET REP. (E-16) UA1, 3, 4, 6
CAMEROUN (AF-36) FE8	LINE ISLANDS (O-31) VR3	ASIATIC RUSSIAN S.F.S.R. (A-18, 19) UA9, 6
CANADA (NA-1 to 5) VE	LITTLE AMERICA (SA-13) KC4	UKRAINE (E-16) UB5
CANAL ZONE (NA-7) KZ5	LORD HOWE ISLAND (O-30) VK2	WHITE RUSSIAN S.S.R. (E-16) UC2
CANARY ISLANDS (AF-33) EA8	LUXEMBOURG (E-14) LX	AZERBAIJAN (E-21) UD6
CANTON ISLAND (O-31) KB6	MACAO (A-24) CR9	GEORGIA (E-21) UF6
CAPE VERDE ISLANDS (AF-35) CR4	MACQUARIE ISLAND (O-30) VK6	ARMENIA (E-21) UG6
CAROLINE ISLANDS (O-27) KC6	MADEIRA ISLANDS (AF-33) CT3	TURKMEN (A-17) UH8
CAYMAN ISLANDS (NA-8) VP5	MALAGASY REP. (Madagascar) (AF-39) 5R8	UZBEK (A-17) UI8
CELEBES & MOLUCCA ISLANDS (A-28) PK6	MALAYA, FEDERATION OF (A-28) 9M2	TADZHIK (A-17) UI8
CENTRAL AFRICAN REPUB. (AF-36) TL8	MALDIVES ISLANDS (A-22) VS9	KAZAKH (A-17) UL7
CEYLON (A-22) 4S7	MALI REPUBLIC (AF-35) FB8	KIRGHIZ (A-17) UM8
CHAGOS ISLANDS (AF-39) VQ8	MALTA (E-15) ZB1	KARELO-FINNISH REP. (E-16) UN1
CHANNEL ISLANDS (E-14) GC	MANCHURIA (A-24) C9	MOLDAVIA (E-16) UO5
CHILE (SA-12) CE	MARIANAS ISLANDS (Guam) (O-27) KG6	LITHUANIA (E-15) UP
CHINA (A-23 & 24) BY	MARSHALL ISLANDS (O-31) KX6	LATVIA (E-15) UQ
CHRISTMAS ISLAND (O-29) VK9	MARTINIQUE (NA-8) FM7	ESTONIA (E-15) UR
CLIPPERTON ISLAND (NA-7) FO8	MAUQAT & OMAN (A-21) MP4	SPAIN (E-14) EA
COCOS ISLAND (NA-7) TI9	MAURITANIA (AF-35) 5T5	SPANISH GUINEA (AF-36) EA6
COCOS-KEELING IS. (O-29) VK9	MAURITIUS IS. (AF-39) VQ8	SPANISH SAHARA (A-33) EA9
COLOMBIA (SA-9) HK	MEXICO (NA-6) XE	SUDAN (AF-34) ST
COMORO ISLANDS (AF-39) FH8	MIDWAY ISLAND (O-31) KM6	SUMATRA (A-28) PK4
CONGO REPUBLIC (AF-36) TN8	MIQUELON ISLAND (NA-5) FP8	
CONGO, REPUBLIC OF THE (AF-36) 9Q5	MONACO (E-14) 3A2	SURINAM (Netherlands Guiana) (SA-9) PZ
COOK ISLANDS (O-32) ZK1	MONGOLIA (A-23) JT1	SVALBARD (E-40) LA
CORSICA (E-15) FC	MONTSERRAT (NA-8) VP2	SWAN ISLAND (NA-7) KS4
COSTA RICA (NA-7) TI	MOROCCO (AF-33) CN	SWAZILAND (AF-38) ZS7
CRETE (E-20) SV	MOROCCO (Zona Norte) (AF-33) CN9	SWEDEN (E-14) SL, SM
CUBA (NA-8) CM, CO	MOZAMBIQUE (AF-37) CR7	SWITZERLAND (E-14) HB
CYPRUS (A-20) ZC4		SYRIA (A-20) YK
CZECHOSLOVAKIA (E-15) OK	NAURU ISLAND (O-31) VK9	TANGANYIKA (AF-37) VQ3
DAHOMY (AF-35) FF5	NAVASSA ISLAND (NA-8) KC4	TASMANIA (O-30) VK7
DAS ISLAND (A-21) MP4	NEPAL (A-22) 9N1	TCHAD REPUBLIC (AF-36) TT8
DENMARK (E-14) OZ	NETHERLANDS (E-14) PA, PI	THAILAND (A-26) HS
DODECANESE ISLANDS (E-20) SV5	NETHERLANDS ANTILLES (SA-9) PJ	TIBET (A-23) AC4
DOMINICA (NA-8) VP2	NETHERLANDS NEW GUINEA (O-28) JZ6	TIMOR, Portuguese (O-28) CR10
DOMINICAN REPUBLIC (NA-8) HI	NEW CALEDONIA (O-32) FK8	TINIAN ISLAND (O-27) KG6T
EASTER ISLAND (SA-12) CE6A	NEWFOUNDLAND (NA-5) VO1	TOGO (AF-35) FD8
ECUADOR (SA-10) HC	NEW GUINEA, N.E. (O-28) VK9	TONGA (Friendly) ISLANDS (O-32) VR5
EGYPT (AF-34) SU	NEW HEBRIDES (O-32) FU8, YJ	TRIESTE (E-15) II
EL SALVADOR (NA-7) YS	NEW ZEALAND (O-32) ZL	
ENDERBURY ISLAND (O-31) KB6	NICARAGUA (NA-7) YN	TRINIDAD & MARTIN VAZ IS. (SA-11) PY6
ENGLAND (E-14) G	NIGER (AF-35) SU7	TRINIDAD & TOBAGO (SA-9) VP4
ERITREA (AF-37) ET2	NIGERIA (AF-35) 5N2	
ETHIOPIA (AF-37) ET3	NIUE (O-32) ZK2	GOUGH ISLANDS (AF-38) ZD9
FAEROES ISLANDS (E-14) OY	NORFOLK ISLAND (O-32) VK9	TROMELIN ISLAND (AF-39) FB8
FALKLAND ISLANDS (SA-13) VP8	NORTHERN IRELAND (E-14) GI	TRUCIAL OMAN (A-21) MP4
FANNING ISLAND (O-31) VR3	NORWAY (E-14) LA	TUNISIA (AF-33) 3V8
FERNANDO DE NORONHA (SA-11) PY6	NYASALAND (AF-37) ZD6	TURKEY (A-20) TA
FIJI ISLANDS (O-32) VR2	OKINAWA (A-25) KR6, KR8	TURKS & CAICOS ISLANDS (NA-8) VP5
FINLAND (E-15) OH	OMAN (A-21) MP4	UGANDA (AF-37) VQ5
FORMOSA (A-24) BV		UNION OF SOUTH AFRICA (AF-38) ZS
FRANCE (E-14) F	PAKISTAN (A-21, 22) AP	UNITED STATES OF AMERICA (NA-3, 4, 5) W, K
FRENCH OCEANIA (O-32) FO8	PALMYRA ISLANDS (O-31) KP6	UPPER VOLTA (AF-35) FF6
GABON REPUBLIC (AF-36) TR8	PANAMA (NA-7) HP	URUGUAY (SA-13) CX
GALAPAGOS ISLANDS (SA-10) HC8	PAPUA TERRITORY (O-28) VK9	
GAMBIA (AF-35) ZD3	PARAGUAY (SA-11) ZP	VATICAN CITY (E-15) HV
GERMAN FEDERAL REP., WEST (E-14) DJ, DL	PERU (SA-10) OA	VENEZUELA (SA-9) YV
GERMAN DEMOCRATIC REP., EAST (E-14) DM	PHILIPPINE ISLANDS (O-27) DU	VIETNAM (A-26) 3W8
GHANA (AF-35) 9G1	PHOENIX ISLANDS (O-31) KB6	VIRGIN ISLANDS (NA-8) KV4
GIBRALTAR (E-14) ZB2	PITCAIRN ISLAND (O-32) VR6	VOLCANO IS. (O-27) KG6I
GILBERT ISLANDS (O-31) VR1	POLAND (E-15) SP	WAKE ISLAND (O-31) KW6
GOA (Portuguese India) (A-22) CR8	PORTUGAL (E-14) CT1	WALES (E-14) GW
GREECE (E-20) SV		WALLIS & FUTUNA ISLANDS (O-32) FW8
GREENLAND (NA-40) OX	PRINCE EDWARD & MARION ISLANDS (AF-38) ZS2	YEMEN (A-21) 4W1
GUADELOUPE (NA-8) FG7	PUERTO RICO (NA-8) KP4	YUGOSLAVIA (E-15) YT, YU
GUAM (O-27) KG6	QATAR (A-21) MP4	ZANZIBAR (AF-37) VO1
GUANTANAMO BAY (NA-8) KG4		

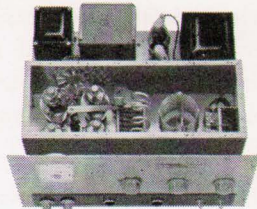




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These are listed below. Study them. Remember them. You might save your life that way!

**The 7 danger signals  
of cancer**

1. Unusual bleeding or discharge.
2. A lump or thickening in the breast or elsewhere.
3. A sore that does not heal.
4. Change in bowel or bladder habits.
5. Hoarseness or cough.
6. Indigestion or difficulty in swallowing.
7. Change in wart or mole.

If your signal lasts longer than two weeks, see your doctor. Only he can tell if it is cancer. Guard your family. Fight cancer with a checkup—and a check to the:

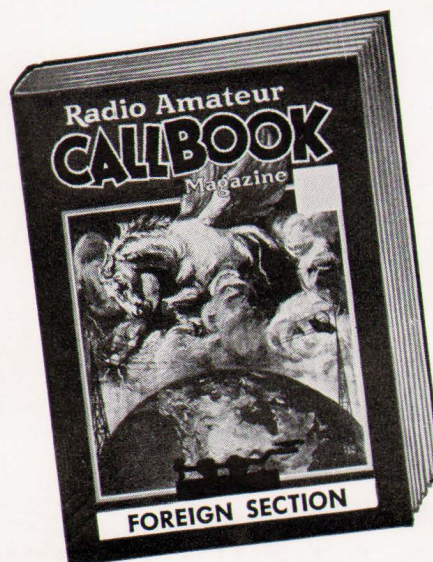
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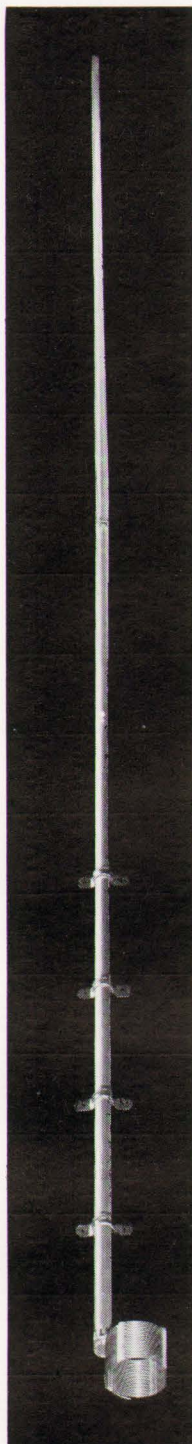
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**YOU COULD WORK WONDERS WITH A GOTHAM VERTICAL ANTENNA!****IS K6INI THE WORLD'S CHAMPION DX OPERATOR?**

Judge for yourself! Read his letter and count the DX he has worked—with only 65 watts and a \$16.95 Gotham V-80 Vertical Antenna.

2405 Bowditch, Berkeley 4, California  
January 31, 1959

Gentlemen:

I just thought I would drop you a line and let you know how pleased I am with your V-80 vertical antenna. I have been using it for almost two years now, and am positively amazed at its performance with my QRP 65 watts input! Let me show you what I mean:

I have worked over 100 countries and have received very fine reports from many DX stations, including 599 reports from every continent except Europe (589)! I have also worked enough stations for my WAC, WAS, WAJAD and ADXC awards, and I am in the process of working for several other awards. And all this with your GOTHAM V-80 vertical antenna!

Frankly, I fail to see how anyone could ask for better performance with such low power, limited space and a limited budget. In my opinion, the V-80 beats them all in its class.

I am enclosing a list of DX countries I have worked to give you an idea of what I have been talking about.

Wishing you the best for 1959, I am

Sincerely yours,

Thomas G. Gabbert, K6INI (Ex-T12TG)

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☐ V40 VERTICAL ANTENNA FOR 40, 20, 15, 10 AND 6 METER BANDS. ESPECIALLY SUITED FOR THE NOVICE WHO OPERATES 40 AND 15 .....\$14.95

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Name .....

Address .....

City..... Zone..... State.....

**FILL IN AND SEND TODAY!**



# WORLD TIME CONVERSION CHART IN HOURS

Greenwich Meridian Time, London, Eng- land.	Central Europe, Ber- lin, Geneva, Stock- holm, Vienna.	Eastern Europe, Ath- ens, Cape Town, Cairo, Moscow	Arabia, Armenia, Ethiopia, Madagas- car.	Mauritius, Persia, Reunion Island.	Central Russia, Bom- bay, India.	Calcutta, Novosi- birsk Russia, Tibet.	French Indo China, Siam, Sumatra.	Philippine Islands, Perth, Australia.	Central Australia, Tokyo, Japan.	Eastern Australia, Melbourne, Sydney.	New Caledonia, New Zealand.	International Date Line, Fiji Islands.	Nome, Alaska, Samoa Islands.	Hawaiian Islands, Midway Islands.	Eastern Alaska, Dawson, Juneau.	Pacific Standard Time, Los Angeles, Seattle.	Mountain Standard Time, Calgary, Denver, Phoenix.	Central Standard Time, Chicago, Costa Rica.	Eastern Standard Time, Montreal, New York, Peru.	Atlantic Standard Time, Argentina, Nova Scotia.	Greenland, Rio de Janeiro, Brazil.	Azores.	Iceland, Canary Islands.
0000	1AM	2AM	3AM	4AM	5AM	6AM	7AM	8AM	9AM	10AM	11AM	Noon	1PM	2PM	3PM	4PM	5PM	6PM	7PM	8PM	9PM	10PM	11PM
0100	2AM	3AM	4AM	5AM	6AM	7AM	8AM	9AM	10AM	11AM	Noon	1PM	2PM	3PM	4PM	5PM	6PM	7PM	8PM	9PM	10PM	11PM	Mid Night
0200	3AM	4AM	5AM	6AM	7AM	8AM	9AM	10AM	11AM	Noon	1PM	2PM	3PM	4PM	5PM	6PM	7PM	8PM	9PM	10PM	11PM	Mid Night	1AM
0300	4AM	5AM	6AM	7AM	8AM	9AM	10AM	11AM	Noon	1PM	2PM	3PM	4PM	5PM	6PM	7PM	8PM	9PM	10PM	11PM	Mid Night	1AM	2AM
0400	5AM	6AM	7AM	8AM	9AM	10AM	11AM	Noon	1PM	2PM	3PM	4PM	5PM	6PM	7PM	8PM	9PM	10PM	11PM	Mid Night	1AM	2AM	3AM
0500	6AM	7AM	8AM	9AM	10AM	11AM	Noon	1PM	2PM	3PM	4PM	5PM	6PM	7PM	8PM	9PM	10PM	11PM	Mid Night	1AM	2AM	3AM	4AM
0600	7AM	8AM	9AM	10AM	11AM	Noon	1PM	2PM	3PM	4PM	5PM	6PM	7PM	8PM	9PM	10PM	11PM	Mid Night	1AM	2AM	3AM	4AM	5AM
0700	8AM	9AM	10AM	11AM	Noon	1PM	2PM	3PM	4PM	5PM	6PM	7PM	8PM	9PM	10PM	11PM	Mid Night	1AM	2AM	3AM	4AM	5AM	6AM
0800	9AM	10AM	11AM	Noon	1PM	2PM	3PM	4PM	5PM	6PM	7PM	8PM	9PM	10PM	11PM	Mid Night	1AM	2AM	3AM	4AM	5AM	6AM	7AM
0900	10AM	11AM	Noon	1PM	2PM	3PM	4PM	5PM	6PM	7PM	8PM	9PM	10PM	11PM	Mid Night	1AM	2AM	3AM	4AM	5AM	6AM	7AM	8AM
1000	11AM	Noon	1PM	2PM	3PM	4PM	5PM	6PM	7PM	8PM	9PM	10PM	11PM	Mid Night	1AM	2AM	3AM	4AM	5AM	6AM	7AM	8AM	9AM
1100	Noon	1PM	2PM	3PM	4PM	5PM	6PM	7PM	8PM	9PM	10PM	11PM	Mid Night	1AM	2AM	3AM	4AM	5AM	6AM	7AM	8AM	9AM	10AM
1200	1PM	2PM	3PM	4PM	5PM	6PM	7PM	8PM	9PM	10PM	11PM	Mid Night	1AM	2AM	3AM	4AM	5AM	6AM	7AM	8AM	9AM	10AM	11AM
1300	2PM	3PM	4PM	5PM	6PM	7PM	8PM	9PM	10PM	11PM	Mid Night	1AM	2AM	3AM	4AM	5AM	6AM	7AM	8AM	9AM	10AM	11AM	Noon
1400	3PM	4PM	5PM	6PM	7PM	8PM	9PM	10PM	11PM	Mid Night	1AM	2AM	3AM	4AM	5AM	6AM	7AM	8AM	9AM	10AM	11AM	Noon	1PM
1500	4PM	5PM	6PM	7PM	8PM	9PM	10PM	11PM	Mid Night	1AM	2AM	3AM	4AM	5AM	6AM	7AM	8AM	9AM	10AM	11AM	Noon	1PM	2PM
1600	5PM	6PM	7PM	8PM	9PM	10PM	11PM	Mid Night	1AM	2AM	3AM	4AM	5AM	6AM	7AM	8AM	9AM	10AM	11AM	Noon	1PM	2PM	3PM
1700	6PM	7PM	8PM	9PM	10PM	11PM	Mid Night	1AM	2AM	3AM	4AM	5AM	6AM	7AM	8AM	9AM	10AM	11AM	Noon	1PM	2PM	3PM	4PM
1800	7PM	8PM	9PM	10PM	11PM	Mid Night	1AM	2AM	3AM	4AM	5AM	6AM	7AM	8AM	9AM	10AM	11AM	Noon	1PM	2PM	3PM	4PM	5PM
1900	8PM	9PM	10PM	11PM	Mid Night	1AM	2AM	3AM	4AM	5AM	6AM	7AM	8AM	9AM	10AM	11AM	Noon	1PM	2PM	3PM	4PM	5PM	6PM
2000	9PM	10PM	11PM	Mid Night	1AM	2AM	3AM	4AM	5AM	6AM	7AM	8AM	9AM	10AM	11AM	Noon	1PM	2PM	3PM	4PM	5PM	6PM	7PM
2100	10PM	11PM	Mid Night	1AM	2AM	3AM	4AM	5AM	6AM	7AM	8AM	9AM	10AM	11AM	Noon	1PM	2PM	3PM	4PM	5PM	6PM	7PM	8PM
2200	11PM	Mid Night	1AM	2AM	3AM	4AM	5AM	6AM	7AM	8AM	9AM	10AM	11AM	Noon	1PM	2PM	3PM	4PM	5PM	6PM	7PM	8PM	9PM
2300	Mid Night	1AM	2AM	3AM	4AM	5AM	6AM	7AM	8AM	9AM	10AM	11AM	Noon	1PM	2PM	3PM	4PM	5PM	6PM	7PM	8PM	9PM	10PM

With this chart you can convert standard time in any time zone to GMT or tell what time it is in other parts of the world. To correctly use this chart visualize each horizontal line as a complete circle. From your time zone tracing horizontally to the right (Counter Clockwise) it will be tomorrow when you pass midnight and yesterday when you pass the international date line. To the left (Clockwise) it will be yesterday when you pass midnight and tomorrow when you pass the international date line. There is no change in date when you pass both midnight and the international date line going in one direction. For instance at 8 PM in New York Eastern Standard Time it is 2 AM tomorrow in Berlin, Germany and 11 AM tomorrow in Sydney, Australia. Always trace in the shortest direction from your time zone to find what time it is in any other zone. Copyright 1938 Radio Amateur Call Book, Inc., Chicago, USA.



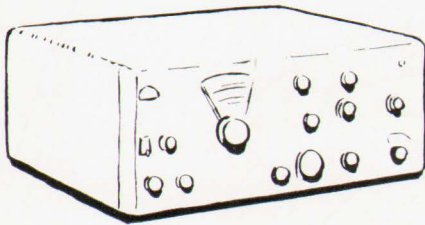
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TRANSISTOR  
TELEPHONE  
AMPLIFIER

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YOUR RECEIVER  
ALSO HAS MANY  
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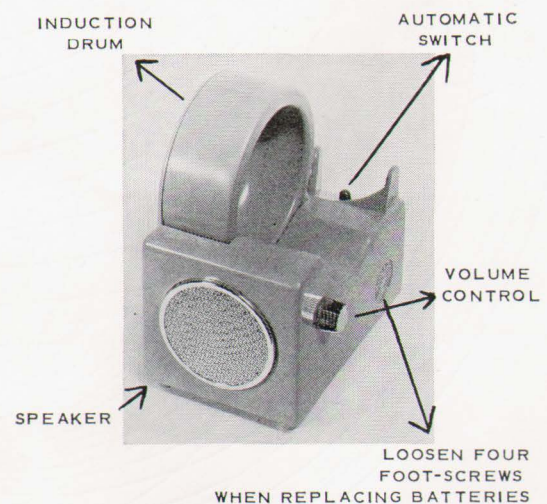
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c/o Call Book  
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Gentlemen:

Please send postpaid your AMP-O-FON, for which I enclose payment of \$19.95, satisfaction guaranteed. Illinois residents enclose 4% sales tax. Refund if returned in 10 days.

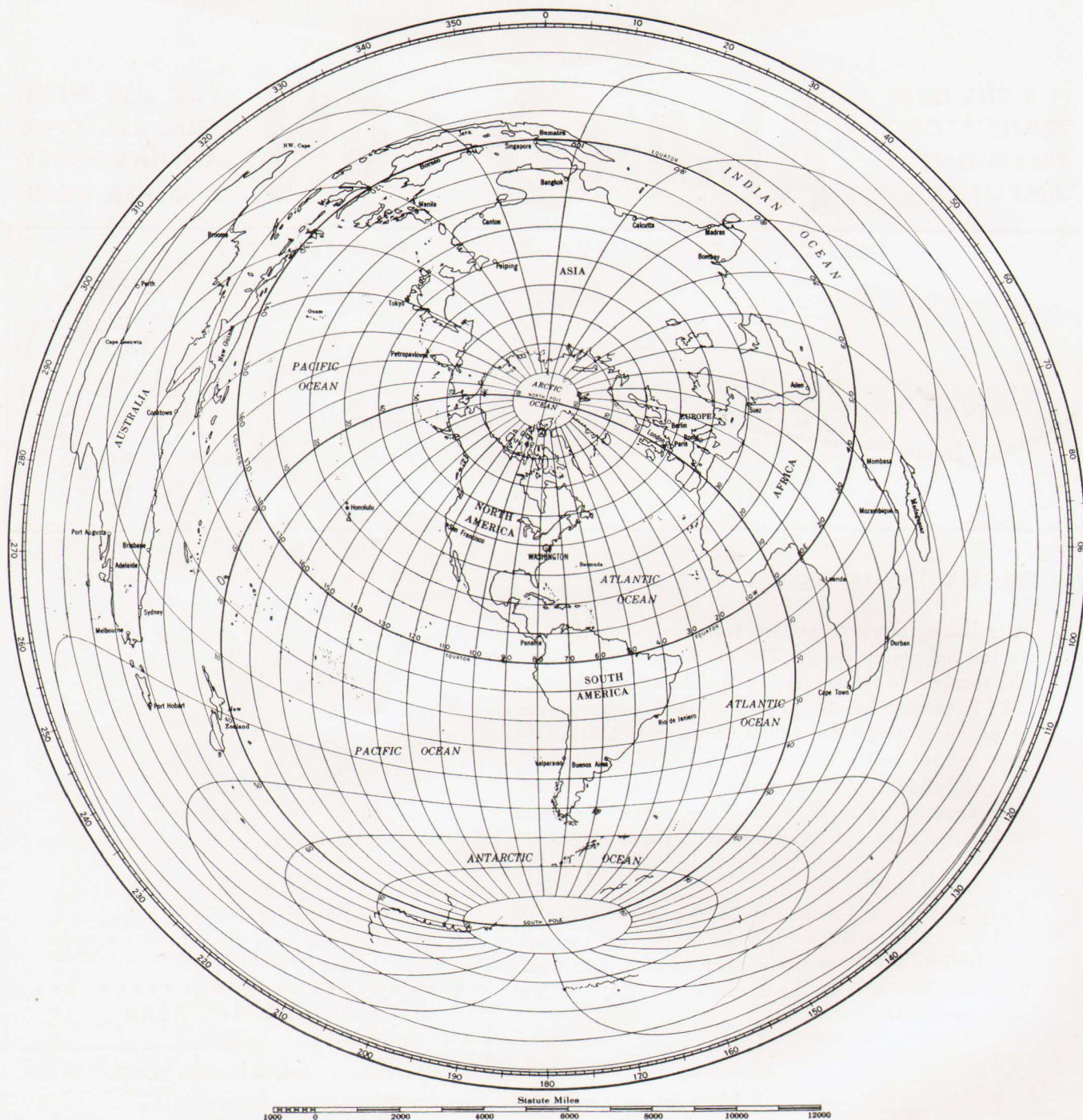
Name \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ Zone \_\_\_\_\_ State \_\_\_\_\_



# Great Circle Chart of the World Centered on WASHINGTON, D. C.



To find the great circle bearing of any point in the world from Washington, D. C., draw a straight line from the center and note the reading in degrees as indicated on the outer scale. The bar scale may be used to determine the approximate distance. This map was prepared by the Hydrographic Office of the U. S. Navy Department.





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splatter**

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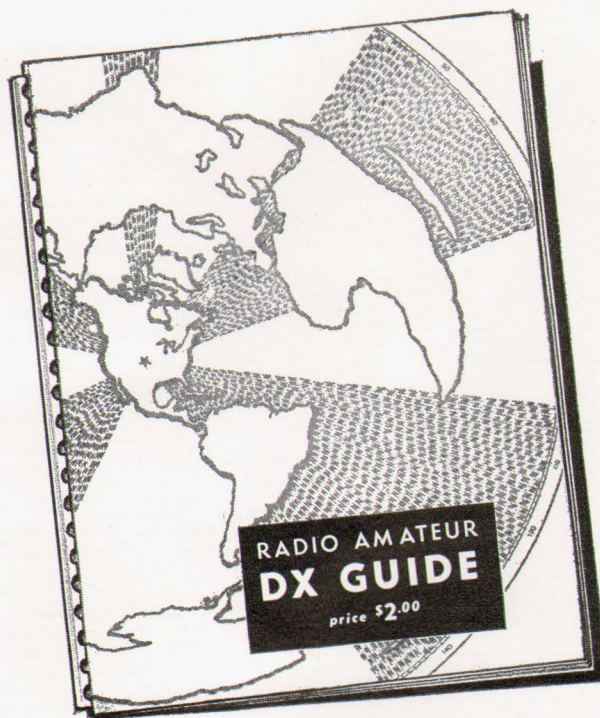
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# POSTAL INFORMATION

Below are postal rates for QSL cards, first class letters and air mail letters to United States Possessions and foreign countries. First class rates are the rate for the first ounce. If the rate indicated is 11¢, add 7¢ for each additional ounce or fraction; if the rate indicated is 4¢, add 4¢ for each additional ounce or fraction.

Air mail rates are the rate for each half ounce, except where indicated.

International reply coupons may be purchased at any United States Post Office. Upon presentation at a post office in any country, these coupons are convertible into postage stamps of that country. The column marked "RP" shows the number of international reply coupons required to prepay an air mail letter of the first weight unit from the countries indicated to the United States.

COUNTRY	QSL cards	First class	Air mail	RP	COUNTRY	QSL cards	First class	Air mail	RP	COUNTRY	QSL cards	First class	Air mail	RP
ADEN	.07	\$.11	\$.25	9	GABON REPUBLIC	.07	.11	.25	3	PAKISTAN	.07	.11	.25	5
AFGHANISTAN	.07	.11	.25	5	GAMBIA	.07	.11	.25	9	PANAMA	.07	.11	.13	2
ALAND ISLANDS	.07	.11	.15	2	GERMANY	.07	.11	.15	2	PAPUA TERRITORY	.07	.11	.25	4
ALASKA	.03	.04	.07*		GHANA	.07	.11	.25	6	PARAGUAY	.07	.11	.15	3
ALBANIA	.07	.11	.15	2	GIBRALTAR	.07	.11	.15	3	PERU	.07	.11	.15	8
ALGERIA	.07	.11	.15	3	GILBERT AND ELLICE ISLANDS	.07	.11	.25	5	PHILIPPINE ISLANDS	.07	.11	.25	3
ANDORRA	.07	.11	.15	3	GOA	.07	.11	.25	4	PITCAIRN ISLAND	.07	.11	.25	
ANGOLA	.07	.11	.25	3	GREECE	.07	.11	.15	2	POLAND	.07	.11	.15	2
ARGENTINA	.07	.11	.15	5	GREENLAND	.07	.11	.15	2	PORTUGAL	.07	.11	.15	2
ASCENSION ISLAND	.07	.11	.15	3	GUADALUPE	.07	.11	.13	2	PORTUGUESE GUINEA	.07	.11	.25	2
AUSTRALIA	.07	.11	.25	4	GUATEMALA	.07	.11	.13	2					
AUSTRIA	.07	.11	.15	2	GUINEA, REPUBLIC OF	.07	.11	.25	2					
AZORES	.07	.11	.15	2										
					HAITI	.07	.11	.13	5	REUNION ISLAND	.07	.11	.25	3
BAHAMAS	.07	.11	.13	2	HONDURAS	.07	.11	.13	2	RHODESIA AND NYASALAND	.07	.11	.25	7
BALEARIC ISLANDS	.07	.11	.15	3	HONG KONG	.07	.11	.25	5	RIO DE ORO	.07	.11	.25	6
BARBADOS	.07	.11	.13	3	HUNGARY	.07	.11	.15	3	RIO MUNI	.07	.11	.25	9
BECHUANALAND	.07	.11	.25	6						RUANDA-URUNDI	.07	.11	.25	
BELGIUM	.07	.11	.15	2	ICELAND	.07	.11	.15	2	RUMANIA	.07	.11	.15	4
BERMUDA	.07	.11	.13	2	IFNI	.07	.11	.25	6	RYUKYU ISLANDS	.07	.11	.25	5
BOLIVIA	.07	.11	.15	2	INDIA	.07	.11	.25	6					
BRAZIL	.07	.11	.15	3	INDONESIA	.07	.11	.25	6	SAHARA	.07	.11	.25	6
BRITISH CAMEROONS	.07	.11	.25	4	IRAN	.07	.11	.25	3	ST. HELENA	.07	.11	.25	3
BRITISH GUIANA	.07	.11	.15	2	IRAQ	.07	.11	.25	3	ST. PIERRE AND MIQUELON	.07	.11	.13	2
BRITISH HONDURAS	.07	.11	.13	2	IRELAND	.07	.11	.15	3	SAMOA (WESTERN)	.07	.11	.25	6
BRITISH NORTH BORNEO	.07	.11	.25	6	ISRAEL	.07	.11	.25	4	SANTA CRUZ ISLAND	.07	.11	.25	4
BRUNEI	.07	.11	.15	7	ITALY	.07	.11	.15	2	SARAWAK	.07	.11	.25	6
BULGARIA	.07	.11	.15	3	IVORY COAST	.07	.11	.25	2	SAUDI ARABIA	.07	.11	.25	3
BURMA	.07	.11	.25	5						SENEGAL	.07	.11	.25	2
					JAMAICA	.07	.11	.13	2	SEYCHELLES	.07	.11	.25	3
CAMBODIA	.07	.11	.25	4	JAPAN	.07	.11	.25	3	SIERRA LEONE	.07	.11	.25	6
CAMEROON	.07	.11	.25	3	JORDAN	.07	.11	.25	4	SOLOMON ISLANDS	.07	.11	.25	8
CANADA	.03	.04	.07*	2	KENYA & UGANDA	.07	.11	.25	7	SOMALI REPUBLIC	.07	.11	.25	5
CANARY ISLANDS	.07	.11	.15	3	KOREA	.07	.11	.25	4	SOMALILAND				
CAPE VERDE ISLANDS	.07	.11	.25	3	KUWAIT	.07	.11	.25		PROTECTORATE	.07	.11	.25	8
CARIBBEAN, BRITISH TERRITORIES IN	.07	.11	.15	2						SOUTH-WEST AFRICA	.07	.11	.25	6
CAYMAN ISLANDS	.07	.11	.15	3	LABUAN	.07	.11	.25		SPAIN	.07	.11	.15	3
CENTRAL AFRICAN REPUB.	.07	.11	.25		LAOS	.07	.11	.25	3	SUDAN	.07	.11	.25	4
CEYLON	.07	.11	.25	5	LATVIA	.07	.11	.25	3	SURINAM	.07	.11	.15	1
CHAD	.07	.11	.25	3	LEBANON	.07	.11	.25	3	SWEDEN	.07	.11	.15	2
CHILE	.07	.11	.15	1	LEEWARD ISLANDS	.07	.11	.13		SWITZERLAND	.07	.11	.15	2
CHINA, REPUBLIC OF	.07	.11	.25	3	LIBERIA	.07	.11	.25	5	SYRIA	.07	.11	.25	3
CHINA (CONTINENTAL)	.07	.11	.25	3	LIBYA	.07	.11	.15	2					
COLOMBIA	.07	.11	.15	5	LITHUANIA	.07	.11	.25	3	TANGANYIKA	.07	.11	.25	7
COMORO ISLANDS	.07	.11	.25	3	LUXEMBOURG	.07	.11	.15	2	TASMANIA	.07	.11	.25	4
CONGO (BRAZZAVILLE AND LEOPOLDVILLE)	.07	.11	.25	2	MACAO	.07	.11	.25	3	THAILAND	.07	.11	.25	3
CORSICA	.07	.11	.15	2	MALAGASY REP. (MADAGASCAR)	.07	.11	.25	3	TIMOR	.07	.11	.25	4
COSTA RICA	.07	.11	.13	3	MADEIRA ISLANDS	.07	.11	.15	2	TOGO	.07	.11	.25	2
CUBA	.07	.11	.13	4	MALAYA	.07	.11	.25	6	TONGA (FRIENDLY) ISLANDS	.07	.11	.25	4
CYPRUS	.07	.11	.25	4	MALI	.07	.11	.25		TRINIDAD AND TOBAGO	.07	.11	.13	3
CZECHOSLOVAKIA	.07	.11	.15	3	MALTA	.07	.11	.15	6	TRISTAN DE CUNHA	.07	.11	.25	6
					MARTINIQUE	.07	.11	.13	2	TUNISIA	.07	.11	.15	2
DAHOMY	.07	.11	.25	2	MAURITANIA	.07	.11	.25	2	TURKEY	.07	.11	.15	3
DENMARK	.07	.11	.15	2	MAURITIUS	.07	.11	.25	4	TURKS ISLAND	.07	.11	.13	2
DOMINICAN REPUBLIC	.07	.11	.13	2	MEXICO	.03	.04	.07*	2					
					MOROCCO	.07	.11	.15	2	UNION OF SOUTH AFRICA	.07	.11	.25	6
Ecuador	.07	.11	.15	3	MOZAMBIQUE	.07	.11	.25	4	U.S.S.R.	.07	.11	.25	3
EGYPT	.07	.11	.15	3						UPPER VOLTA	.07	.11	.25	3
EL SALVADOR	.07	.11	.13	2	NAURU ISLAND	.07	.11	.25		URUGUAY	.07	.11	.15	4
ENGLAND	.07	.11	.15	3	NEPAL	.07	.11	.25						
ERITREA	.07	.11	.25	6	NETHERLANDS	.07	.11	.15	2	VATICAN CITY	.07	.11	.15	2
ESTONIA	.07	.11	.25	3	NETHERLANDS ANTILLES	.07	.11	.13	2	VENEZUELA	.07	.11	.15	2
ETHIOPIA	.07	.11	.25	4	NETHERLANDS NEW GUINEA	.07	.11	.25	3	VIETNAM	.07	.11	.25	3
					NEW CALEDONIA	.07	.11	.25	3					
FALKLAND ISLANDS	.07	.11	.15	3	NEW GUINEA, TERRITORY OF	.07	.11	.25		WINDWARD ISLANDS	.07	.11	.13	3
FAEROE ISLANDS	.07	.11	.15	2	NEW HEBRIDES	.07	.11	.25	3					
FII ISLANDS	.07	.11	.25	6	NEW ZEALAND	.07	.11	.25	6	YEMEN	.07	.11	.25	
FINLAND	.07	.11	.15	2	NICARAGUA	.07	.11	.13	4	YUGOSLAVIA	.07	.11	.15	2
FRANCE	.07	.11	.15	2	NIGER	.07	.11	.25	2					
FRENCH GUIANA	.07	.11	.15	2	NIGERIA	.07	.11	.25	4	ZANZIBAR	.07	.11	.25	8
FRENCH OCEANIA	.07	.11	.25	2	NORWAY	.07	.11	.15	2					
FRENCH SOMALILAND	.07	.11	.25	3										

\*Rate per ounce.

QSL cards and Aerogrammes (air letter sheets) may be sent to any country in the world by air mail for 11¢ (exception, QSL cards to Canada and Mexico, 5¢).

These rates are revised as of July 1, 1961.



### Federal Communications Commission Examination Points

Examinations for commercial and amateur radio operator licenses are conducted at the following F.C.C. field offices on the days designated by the Engineer in Charge of each office. Specific dates should be obtained from the Engineer in Charge.

Radio District	Address of the Engineer in charge
1—BOSTON 9, MASSACHUSETTS	1600 Custom House
2—NEW YORK 14, NEW YORK	748 Federal Building 641 Washington Street
3—PHILADELPHIA 6, PENNSYLVANIA	1005 New U. S. Customhouse
4—BALTIMORE 2, MARYLAND	400 McCawley Building 400 E. Lombard Street
5—NORFOLK 10, VIRGINIA	402 Federal Building
6—ATLANTA 3, GEORGIA	718 Atlanta National Bldg., 50 Whitehall St., S.W.
6S—SAVANNAH, GEORGIA (P. O. 77)	214 Post Office Building
7—MIAMI 1, FLORIDA	312 Federal Building
7T—TAMPA 6, FLORIDA	Rm. 201-221 N. Howard Ave.
8—NEW ORLEANS 12, LOUISIANA	608 Federal Office Building 600 South Street
8M—MOBILE 10, ALABAMA	419 U. S. Court and Customs House
9—HOUSTON 11, TEXAS	326 U. S. Appraisers Building 7300 Wingate Street
9B—BEAUMONT, TEXAS (P. O. Box 1527)	301 Post Office Building 300 Willow Street
10—DALLAS 2, TEXAS	401 States General Life Insurance Bldg. 708 Jackson Street
11—LOS ANGELES 14, CALIFORNIA	Mez 50, 849 South Broadway
11SD—SAN DIEGO 1, CALIFORNIA	Fox Theater Building 1245 Seventh Avenue
12—SAN FRANCISCO 26, CALIFORNIA	323-A Customhouse 555 Battery Street
13—PORTLAND 5, OREGON	201 U. S. Court House 620 S. W. Main Street
14—SEATTLE 4, WASHINGTON	802 Federal Office Building 1st Avenue and Marion
15—DENVER 2, COLORADO	521 New Customhouse 19th between California & Stout Streets
16—ST. PAUL 2, MINNESOTA	208 Federal Courts Building 6th & Market Streets
17—KANSAS CITY 6, MISSOURI	3100 Federal Office Building 911 Walnut Street
18—CHICAGO 4, ILLINOIS	826 U. S. Courthouse 219 South Clark Street
19—DETROIT 26, MICHIGAN	1029 Federal Building
20—BUFFALO 3, NEW YORK	328 Post Office Building Ellicott and Swan Streets
21—HONOLULU 13, HAWAII	502 Federal Bldg. P. O. Box 1021
22—SAN JUAN 13, PUERTO RICO	322-323 Federal Building Post Office Box 2987
23—ANCHORAGE, ALASKA	Room 55, U. S. Post Office Bldg.
23J—JUNEAU, ALASKA	6 Shattuck Building
24—WASHINGTON 25, D. C.	718 Jackson Pl., N. W.

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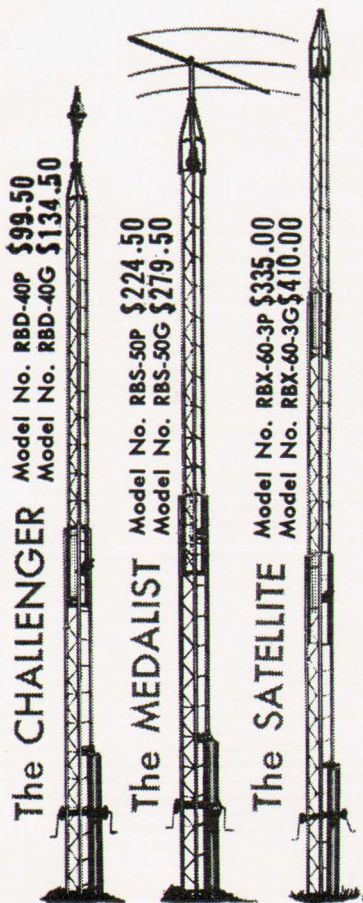


# INTERNATIONAL "Q" SIGNALS

Abbreviation	Question	Answer or Advice	Abbreviation	Question	Answer or Advice
QRA	What is the name of your station?	The name of my stations is . . .	Q SX	Will you listen to . . . [call sign(s)] on . . . kc/s (or Mc/s)	I am listening to . . . [call sign(s)] on . . . kc/s (or Mc/s).
QRB	How far approximately are you from my station?	The approximate distance between our stations is . . . nautical miles (or kilometres)	Q SY	Shall I change to transmission on another frequency?	Change to transmission on another frequency [or on . . . kc/s (or Mc/s)].
QRD	Where are you bound and where are you from?	I am bound for . . . from . . .	Q SZ	Shall I send each word or group more than once?	Send each word or group twice (or . . . times).
QRG	Will you tell me my exact frequency or that of . . .)?	Your exact frequency (or that of . . . is . . . kc/s (or Mc/s).	Q TA	Shall I cancel telegram number . . . as if it had not been sent?	Cancel telegram number . . . as if it had not been sent.
QRH	Does my frequency vary?	Your frequency varies.	Q TB	Do you agree with my counting of words?	I do not agree with your counting of words; I will repeat the first letter or digit of each word or group.
QRI	How is the tone of my transmission?	The tone of your transmission is . . . (1. Good; 2. Variable; 3. Bad).	Q TC	How many telegrams have you to send?	I have . . . telegrams for you (or for . . .).
QRK	What is the readability of my signals (or those of . . .)?	The readability of your signals (or those of . . .) is . . . (1. Unreadable; 2. Readable now and then; 3. Readable, but with difficulty; 4. Readable; 5. Perfectly readable).	Q TE	What is my TRUE bearing from you?  What is my TRUE bearing from . . . (call sign)?  or What is the TRUE bearing of . . . (call sign) from . . . (call sign)?	Your TRUE bearing from me is . . . degrees (at . . . hours) or Your TRUE bearing from . . . (call sign) was . . . degrees (at . . . hours) or The TRUE bearing of . . . (call sign) from . . . (call sign) was . . . degrees (at . . . hours).
QRL	Are you busy?	I am busy (or I am busy with . . .). Please do not interfere.	Q TG	Will you send two dashes of ten seconds each followed by your call sign (repeated . . . times) [on . . . kc/s (or Mc/s)]?	I am going to send two dashes of ten seconds each followed by my call sign (repeated . . . times) [on . . . kc/s (or Mc/)]
QRM	Are you being interferred with?	I am being interferred with.	or Will you request . . . to send two dashes of ten seconds followed by his call sign (repeated . . . times) on . . . kc/s (or Mc/s)?	I have requested . . . to send two dashes of ten seconds followed by his call sign (repeated . . . times) on . . . kc/s (or Mc/s).	
QRN	Are you troubled by static?	I am troubled by static.	Q TH	What is your position in latitude and longitude (or according to any other indication)?	My position is . . . latitude . . . longitude (or according to any other indication).
QRO	Shall I increase power?	Increase power.	Q TI	What is your TRUE track?	My TRUE track is . . . degrees.
QRP	Shall I decrease power?	Decrease power.	Q TJ	What is your speed?	My speed is . . . knots (or kilometres per hour).
QRQ	Shall I send faster?	Send faster (. . . words per minute).	Q TL	What is your TRUE heading?	My TRUE heading is . . . degrees.
QRR	Are you ready for automatic operation?	I am ready for automatic operation. Send at . . . words per minute.	Q TN	At what time did you depart from . . . (place)?	I departed from . . . (place) at . . . hours.
QRS	Shall I send more slowly?	Send more slowly (. . . words per minute).	Q TO	Have you left dock (or port)?  Are you airborne?	I have left dock (or port) or I am airborne.
QRT	Shall I stop sending?	Stop sending.	Q TP	Are you going to enter dock (or port)?  Are you going to alight (or land)?	I am going to enter dock (or port) or I am going to alight (or land).
QRU	Have you anything for me?	I have nothing for you.	Q TQ	Can you communicate with my station by means of the International Code of Signals?	I am going to communicate with your station by means of the International Code of Signals.
QRV	Are you ready?	I am ready.	Q TR	What is the correct time?	The correct time is . . . hours.
QRW	Shall I inform . . . that you are calling him on . . . kc/s (or Mc/s).	Please inform . . . that I am calling him on . . . kc/s (or Mc/s).	Q TS	Will you send your call sign for . . . minute(s) now (or at . . . hours) [on . . . kc/s (or Mc/s)] so that your frequency may be measured?	I will send my call sign for . . . minute(s) now (or at . . . hours) [on . . . kc/s (or Mc/s)] so that my frequency may be measured.
QRX	When will you call me again?	I will call you again at . . . hours [on . . . kc/s (or Mc/s)].	Q TU	What are the hours during which your station is open?	My station is open from . . . to . . . hours.
QRY	What is my turn?	Your turn is Number . . . (Relates to communication.)	Q TV	Shall I stand guard for you on the frequency of . . . kc/s (or Mc/s) (from . . . to . . . hours)?	Stand guard for me on the frequency of . . . kc/s (or Mc/s) (from . . . to . . . hours).
QRZ	Who is calling me?	You are being called by . . . [on . . . kc/s or Mc/s)].	Q TX	Will you keep your station open for further communication with me until further notice (or until . . . hours)?	I will keep my station open for further communication with you until further notice (or until . . . hours).
QSA	What is the strength of my signals (or those of . . .)?	The strength of your signals (or those of . . .) is . . . (1. Scarcely perceptible; 2. Weak; 3. Fairly good; 4. Good; 5. Very good).	Q UA	Have you news of . . . (call sign)?	Here is news of . . . (call sign).
QSB	Are my signals fading?	Your signals are fading.	Q UB	Can you give me, in the following order, information concerning: visibility, height of clouds, direction and velocity of ground wind at . . . (place of observation)?	Here is the information requested . . .
QSD	Is my keying defective?	Your keying is defective.	Q UC	What is the number (or other indication) of the last message you received from me [or from (call sign)]?	The number (or other indication) of the last message I received from you [or from . . . (call sign)] is . . .
QSG	Shall I send . . . telegrams at a time?	Send . . . telegrams at a time.	Q UD	Have you received the urgency signal sent by . . . (call sign of mobile station)?	I have received the urgency signal sent by . . . (call sign of mobile station) at . . . hours.
Q SJ	What is the charge to be collected per word to . . . including your internal telegraph charge?	The charge to be collected per word to . . . including my internal telegraph charge is . . . francs.	Q UF	Have you received the distress signal sent by . . . (call sign of mobile station)?	I have received the distress signal sent by . . . (call sign of mobile station) at . . . hours.
QSK	Can you hear me between your signals?	I can hear you between my signals.	Q UG	Will you be forced to alight (or land)?	I am forced to alight (or land immediately).
QSL	Can you acknowledge receipt?	I am acknowledging receipt.	or I shall be forced to alight (or land) at . . . (position or place).		
QSM	Shall I repeat the last telegram which I sent you, or some previous telegram?	Repeat the last telegram which you sent me [or telegram(s) number(s) . . .].	Q UH	Will you give me the present barometric pressure at sea level?	The present barometric pressure at sea level is . . . (units).
QSN	Did you hear me [or . . . (call sign)] on . . . kc/s (or Mc/s)?	I did hear you [or . . . (call sign) on . . . kc/s (or Mc/s)].			
QSO	Can you communicate with . . . direct or by relay?	I can communicate with . . . direct (or by relay through . . .).			
QSP	Will you relay to . . . free of charge?	I will relay to . . . free of charge.			
QSQ	Have you a doctor on board [or is . . . (name of person) on board]?	I have a doctor on board [or . . . name of person] is on board].			
QSU	Shall I send or reply on this frequency [or on . . . kc/s (or Mc/s)] (with emissions of class . . .)?	Send or reply on this frequency [or on . . . kc/s (or Mc/s)] (with emissions of class . . .).			
QSV	Shall I send a series of V's on this frequency [or . . . kc/s (or Mc/s)]?	Send a series of V's on this frequency [or . . . kc/s (or Mc/s)].			
QSW	Will you send on this frequency [or on . . . kc/s (or Mc/s)] (with emissions of class . . .)?	I am going to send on this frequency [or on . . . kc/s (or Mc/s)] (with emissions of class . . .).			



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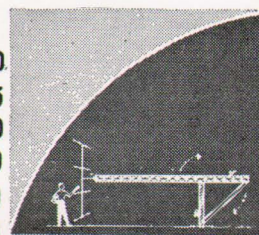
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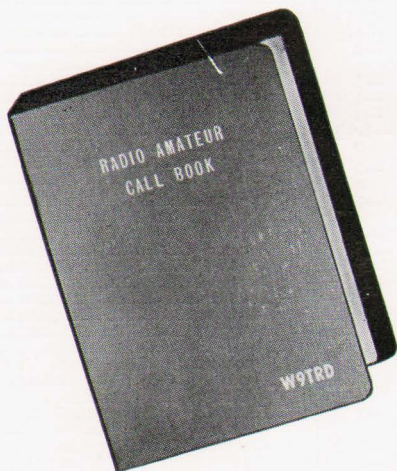


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# STANDARD TIME THROUGHOUT THE WORLD

Compiled by the National Bureau of Standards

Standard time for the world, like longitude, is counted from Greenwich, England, as the prime meridian. Places to the east of Greenwich have faster time than Greenwich, while places to the west have slower time. The world is divided into time zones of approximately 15° for every hour. Since Greenwich is in the 0 zone, the number of any zone, if added or subtracted to the time in Greenwich, will give the corresponding time in that particular zone.

Not all countries follow the International Time Zone System, but some use the time of some principal city as a standard and others have no standard time. The different time zones of the world are numbered east and west of Greenwich. The zone number when added or subtracted, as shown in the following table, from the time of the zone gives the corresponding Greenwich time. Thus zones to the east have faster time than Greenwich and are indicated as minus (—), while those to the west have slower time and are indicated as plus (+).

Country	Zone Number	Country	Zone Number	Country	Zone Number
Admiralty Islands	—10	Ecuador	+5	Norway§	—1
Afghanistan	—4	Egypt†	—2	Nyasaland	—2
Alaska		Eire†	0	Orkney Islands	0
Juneau, Ketchikan, Sitka	+8	Ellice Islands	—12	Pakistan	—5½
Cordova	+9	El Salvador	+6	Palestine†	—2
Central part	+10	England†	0	Panama	+5
West coast, Aleutian Islands	+11	Equatorial Africa, French	—1	Paraguay	+4
Albania†	—1	Eritrea	—3	Peru†	+5
Algeria	—0	Ethiopia	—3	Philippine Islands	—8
Amirante Islands	—4	Falkland Islands†	+4	Poland	
Amsterdam Island	—5	Fanning Island	+11	Western part	—1
Andaman Islands	—6½	Faroe Islands	0	Eastern part	—2
Andora†	0	Finland†	—2	Portugal†	0
Anglo-Egyptian Sudan	—2	France†	0	Puerto Rico	+4
Angola	—1	Gambia	0	Reunion Island	—4
Antigua Island	+4	Germany†	—1	Rhodesia	
Arabia†		Gibraltar†	0	Northern	—2
Aden†	—3	Gilbert Islands	—12	Southern	—2
Argentina†	+4	Gold Coast†	0	Rio de Oro	+1
Aru Islands	—9	Greece†	—2	Rumania	—2
Ascension Island	0	Greenland	+2	Samea Islands	+11
Austral (Tubuai) Islands	+10	Scoresby Sound	+2	San Marino†	—1
Australia		Angmagssalik, Disko Island, Western Coast	+3	Sarawak	—8
Western Australia	—8	Interior†		Saudi Arabia†	0
Northern Territory, South Australia†	—9½	Grenada Island	+4	Scotland	0
New South Wales,† Queensland, Victoria*	—10	Guadeloupe Island	+4	Senegal†	0
Austria†	—1	Guam Island	—10	Seychelles Islands	—4
Azores Islands†	0	Guatemala	+6	Siam	—7
Bahama Islands	+5	Guiana, British, Dutch, French	+3½	Sierra Leone	0
Bahrain Islands	—4	Guinea	0	Society Islands	+10
Balearic Islands†	0	French, Spanish	+1	Solomon Islands	—11
Barbados Island†	+4	Portuguese	+1	Somaliland	—3
Bechuanaland	—2	Haiti	+5	Southwest Africa	—2
Belgium†	0	Hawaiian Islands	+10	Spain†	0
Bermuda Islands†	+4	Hebrides Islands	0	Spitzbergen†	
Bhutan	—5½	Honduras	+6	St. Croix Island	+4
Bolivia	+4	Hungary†	—1	St. Helena Island	0
Borneo†	—8	Iceland†	+1	St. Lawrence Island	+11
Brazil		India†	—5½	St. Lucia Island	+4
Fernando Noronha Island, Isle de		Indo-China†	—8	St. Matthew Island	+11
Trinidad	+2	Iran	—3½	St. Miguel Island	0
Bahia, Ceara, Esperito Santo, Goyaz, Miranhao, Minas-Geraes, Para, Parana, Pernambuco, Piahy, Rio de Janeiro, Rio Grande do Norte, Rio Grande do Sul, Santa Catherina, Sao Paulo	+3	Iraq†	—3	St. Pierre Island†	+4
Amazonas, Matto Grosso	+4	Ireland, Northern†	0	St. Thomas Island	+4
Acre Territory	+5	Isle of Man	0	St. Vincent Island	+4
British Honduras†	+6	Isle of Pines	+5	Sudan (French West Africa)	0
Bulgaria	—3	Italy†	—1	Eastern part	+1
Burma	—6½	Jamaica	+5	Western part	—1
Cameroons	—1	Japan†	—8	Sumatra Island	—7
Canada		Java	—3	Sweden	—1
Belle Isle, Labrador,† Newfoundland†	+3½	Kenya	—3	Switzerland†	—2
Anticosti Island, Cape Breton Island, Magdalen Island, New Brunswick,† Nova Scotia,† Prince Edward Island, Quebec (east of 68° W.),† Sable Island	+4	Kodiak Island	+10	Syria†	—3
Melville Peninsula (east), Ontario (east of 90° W.),† Quebec (west of 68° W.),† Southampton Island	+5	Korea	—8½	Tanganyika	—3
Manitoba, Ontario (west of 90° W.), Melville Peninsula (west), Northwest Territories (east)	+6	Labrador	+3½	Tangier	0
Alberta, Saskatchewan, Northwest Territories (middle)	+7	Laccadive Islands	—5½	Tasmania Island†	—10
British Columbia, Northwest Territories (west)	+8	Latvia*	—2	Timor Island	—9
Yukon	+9	Liberia	—1	Tobago Island	+4
Arctic Islands†	+1	Libya*	—1	Togoland	0
Canary Islands†	+2	Liechtenstein	—1	Tonga (Friendly) Islands	
Cape Verde Islands	—10	Lithuania*	—2	Transjordan*	
Caroline Islands	—5½	Lord Howe Island	—10½	Trinidad Island	+4
Ceylon Island†	—5	Luxembourg*	0	Tunisia	—1
Chagos Archipelago†	+4	Madagascar Island	—3	Turkey†	—2
Chile		Madeira Islands	—7½	Turks Island	+5
China		Malay States	—1	Uganda	—3
Western part	—5	Maldives Islands	—12	Union of South Africa†	—2
Mid-Western part	—6	Malta Island	—4	United States of America†	
Mid-Eastern part, Hainan, Palekoi, Hongkong, Macao	—7	Marshall Islands	+4	Eastern	+5
Eastern part	—8	Martinique Island	+4	Central	+6
Christmas Island	—7	Mauritius Island	+4	Mountain	+7
Colombia	+5	Mexico*		Pacific	+8
Congo		Agua Calientes, Campeche, Chiapas, Chihuahua, Coahuila, Durango, Guanajuato, Guerrero, Jalisco, Mexico, Michoacan, Morelos, Nuevo Leon, Oaxaca, Puebla, Queretaro, Quintana Roo, San Luis Potosi, Tabasco, Tamaulipas, Tlaxcala, Yucatan	+6	Alaska	+10
Western part	—1	Baja California (south of 28° N.), Nayarit, Sinaloa, Sonora	+7	Uruguay†	+3
Eastern part	—2	Baja California (north of 28° N.)	+8	U. S. S. R.†	
Cook Islands	+6	Midway Island	+11	Estonia, Karelo-Finnish, Latvia, Lithuania, Moldavia, Russia, Ukraine, White Russia	—2
Costa Rica	+5	Monaco§	0	Armenia, Azerbaijan, Georgia	—3
Cuba†	+4½	Morocco§	0	Kazak, Tadzhik, Turkmen, Uzbek	—4
Curacao Island	—2	Mozambique	—2	Kirghiz, W. Siberian Region	—5
Cyprus Island	—1	Nepal	—5½	Approximately 82½° to 97½°	—6
Czechoslovakia	0	Netherlands	0	Buryat-Mongol, E. Siberian Region	—7
Dahomey	—1	New Caledonia Islands	—11	Approximately 112½° to 127½°	—8
Denmark†	—2	Newfoundland§	+3½	Kuril Islands, Sakhalin	—9
Dodecanese Islands	+5	New Guinea	—9	Approximately 142½° to 157½°	—10
Dominican Republic†		Western part (Dutch)	—10	Approximately 157½° to 172½°	—11
		Eastern part (British)	—11	Approximately 172½° to coast	—12
		New Hebrides Islands	—12	Vatican City	—1
		New Zealand§	+6	Venezuela	+4½
		Nicaragua	—1	Virgin Islands	+4
		Nigeria	—11½	Wake Island	—12
		Norfolk Island	0	Wales	0
		Northern Ireland§	0	Wrangell Island	—12
				Yap Island	—10
				Yugoslavia	—1
				Zanzibar Island	—3

\*See time Zone Chart of the World No. 5192, published by Hydrographic Office, Navy.

†Fast time in use during part of the year.

‡No definite standard time used.  
§1 hour or 2 hours fast, fixed annually.



Given below are a number of Q signals whose meanings most often need to be expressed with brevity and clearness in amateur work. (Q abbreviations take the form of questions only when each is sent followed by a question mark.)

- QAV Are you calling me? I am calling.....
- QRC Will you tell me my exact frequency in kilocycles? Your frequency is.....kc.
- QRH Does my frequency vary? Your frequency varies.
- QRI How is the tone of my transmission? The tone of your transmission is..... (1. good; 2. variable; 3. bad).
- QRJ Are you receiving me badly? Are my signals weak? I cannot receive you. Your signals are too weak.
- QRK What is the readability of my signals (1 to 5)? The readability of your signals is.....(1 to 5).
- QRL Are you busy? I am busy or busy with (.....).
- QRM Are you being interfered with? I am interfered with.
- QRN Are you troubled by atmospheric? I am being troubled by atmospheric.
- DRQ Shall I send faster? Send faster (..... words per min.).
- QRS Shall I send more slowly? Send more slowly (.....w.p.m.).
- QRT Shall I stop sending? Stop sending.
- QRU Have you anything for me? I have nothing for you.
- QRV Are you ready? I am ready.
- QRW Shall I tell.....that you are calling him? Please tell.....that I am calling him.
- QRX When will you call again? I will call you again at.....hours (on.....kc).
- QRZ By whom am I being called? You are being called by.....
- QSA What is the strength of my signals (1 to 5)? The strength of your signals is.....(1 to 5).
- QSB Does the strength of my signals vary? The strength of your signals varies.
- QSD Is my keying correct? Are my signals distinct? Your keying is incorrect; your signals are bad.
- QSG Shall I send.....telegrams (or one) at a time? Send.....telegrams at a time.
- QSL Can you give me acknowledgment of receipt? I give you acknowledgment of receipt.
- QSM Shall I repeat the last telegram I sent you? Repeat the last telegram you sent me.
- QSO Can you communicate with.....direct (or through.....)? I can communicate with.....direct (or through.....).
- QSP Will you relay to.....? I will relay to.....
- QSV Shall I send a series of VVV.....? Send a series of VVV.
- QSW Will you send on.....kcs? etc. I will send on.....kcs, etc.
- QSX Will you listen for.....(call sign) on.....kcs? I am listening for.....on.....kcs.
- QSY Shall I change to.....kilocycles without changing the type of wave? Change to.....kc. without changing type of wave.
- QSZ Shall I send each word or group twice? Send each word or group twice.
- QTA Shall I cancel nr.....as if it had not been sent? Cancel nr.....as if it had not been sent.
- QTB Do you agree with my number of words? I do not agree with your number of words; I will repeat the first letter of each word and the first figure of each number.
- QTC How many telegrams have you to send? I have.....telegrams for you or for.....
- QTH What is your position (location)? My location is.....(by any indication).
- QTR What is the exact time? The time is.....
- CQ is the general call to any station.
- Special abbreviations adopted by ARRL:
- QST General call preceding a message addressed to all amateurs and ARRL Members. This is in effect "CQ ARRL."
- QRRR Official ARRL "land SOS." A distress call for emergency use only by station in an emergency situation.

## A.R.R.L.-NET "QN" SIGNALS

- QNA Answer in pre-arranged order.
- QNB Act as relay between.....and.....
- QNC All Net stations copy.
- QND Net is directed.
- QNE Entire Net please stand by.
- QNF Net is free.
- QNG Take over as Net Control Station.
- QNH Your Net frequency is high.
- QNI Report into Net or I report into Net.
- QNJ Can you copy me (or.....)?
- QNK Transmit message(s) (for.....) to.....
- QNL Your Net frequency is low.
- QNM You are QRMing.....; please stand by.
- QNN Net Control Station is.....(on.....kc.).
- QNO Going out of Net.
- QNP Unable to copy you (or.....)?
- QNQ Send you information "QNC" or May I transmit message "QNC?"
- QNR Answer.....and relay (or receive) traffic.
- QNS Following stations in Net.....
- QNT Leaving Net temporarily (or for..... minutes) or I request to leave Net temporarily, etc.
- QNU.....has traffic for you; await instructions (or QNU QNR).
- QNV Please request.....to QSV.
- QNW Through whom shall I relay message for.....?
- QNX You are excused from Net or I request to be excused.
- QNY Please shift to another frequency (or to.....kc.) to prevent QRMing other Net stations (or to clear traffic with.....).
- QNZ Zero beat your signal with that of the Net Control Station.



## AMATEUR

**Fundamental, PR Type Z-2**  
Frequency Ranges in Kcs.: 3,500 to 4,000 (80M); 7,000 to 7,425 (40M); 8,000 to 8,222 (2M); 8,334 to 9,000 (6M).

Rugged. Low drift, fundamental oscillators. High activity and power output. Stands up under maximum crystal currents. Stable, long-lasting;  $\pm 500$  cycles.....\$2.95 Net

(All Z-2 Crystals calibrated with a load of 32 mmfd.)

## Third Overtone, PR Type Z-9A

Hermetically sealed; calibrated 24,000 to 24,666 and 25,000 to 27,000 Kc.,  $\pm 3$  Kc.; .050" pins. \$3.95 Net

## 6 Meters, PR Type Z-9A



Fifth overtone; for operating directly in 6-meter band; hermetically sealed; calibrated 50 to 54 Mc.,  $\pm 15$  Kc.; .050" pins.....\$4.95 Net

## SPECIAL TYPES

Commercial Crystals available from 100 Kc. to 70 Mc. Prices on request.

**Type Z-1, Aircraft** 3023.5 Kc. .005% \$3.45 Net



**Z-1, MARS & CAP**  
Official assigned transmitter frequencies in the range. Calibrated to .005%. 1600 to 10000 Kc.....\$3.45 Net

**Type Z-6A, Frequency Standard**  
To determine band-edge. To keep the VFO and receiver properly calibrated. 100 Kc. ....\$6.95 Net

## Type 2XP

Suitable for converters, experimental, etc. Same holder dimensions as Type Z-2.

1600 to 12000 Kc. (Fund.)  $\pm 5$  Kc.....\$3.45 Net

12001 to 25000 Kc. (3d Mode)  $\pm 10$  Kc.....\$4.45 Net

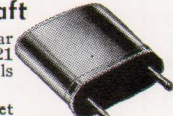


## Type Z-1, TV Marker Crystals

Channels 2 through 13.....\$6.45 Net  
4.5 Mc. Inter-carrier, .01%.....\$2.95 Net  
5.0 Mc. Sig. Generator, .01%.....\$2.95 Net  
10.7 Mc. FM, IF, .01%.....\$2.95 Net

## VHF Type Z-9R, Aircraft

For Lear, Narco and similar equipment operating in the 121 Mc. region, requiring crystals in 30 Mc. range.



Each.....\$4.95 Net

**TYPE Z-9R CITIZENS BAND CLASS "D"**  
FCC assigned frequencies in megacycles: 26.965, 26.975, 26.985, 27.005, 27.015, 27.025, 27.035, 27.055, 27.065, 27.075, 27.085, 27.105, 27.115, 27.125, 27.135, 27.155, 27.165, 27.175, 27.185, 27.205, 27.215, 27.225, 27.255; calibrated to .005%. \$2.95 Net

(Be sure to specify manufacturer and model number of equipment)

**TYPE Z-9R RECEIVER CRYSTALS FOR CITIZENS BAND CLASS "D"**—Specify I.F. frequency, also whether receiver oscillator is above or below transmitter frequency. Calibrated to .005%. \$2.95 Net  
(Be sure to specify manufacturer and model number of equipment)

**TYPE Z-9R RADIO CONTROL CLASS "C"**  
FCC assigned frequencies in megacycles: 26.995, 27.045, 27.095, 27.145, 27.195, 27.255; calibrated to .005%. \$2.95 Net  
(Be sure to specify manufacturer and model number of equipment)

ALL PR CRYSTALS ARE UNCONDITIONALLY GUARANTEED ORDER FROM YOUR JOBBER

**PETERSEN RADIO CO., INC.**

2800 W. BROADWAY  
COUNCIL BLUFFS, IOWA



# AIR-LINE DISTANCES IN MILES BETWEEN CITIES IN THE UNITED STATES

	ATLANTA, GA.	BIRMINGHAM, ALA.	BISMARCK, N. D.	BOSTON, MASS.	BUFFALO, N. Y.	CHARLESTON, W. VA.	CHEYENNE, WYO.	CHICAGO, ILL.	CLEVELAND, OHIO	COLUMBIA, S. C.	DALLAS, TEXAS	DENVER, COLORADO	DES MOINES, IOWA	DETROIT, MICH.	EL PASO, TEXAS	HELENA, MONTANA	HOUSTON, TEXAS	INDIANAPOLIS, IND.	JACKSONVILLE, FLA.	KANSAS CITY, MO.	LITTLE ROCK, ARK.	LOS ANGELES, CALIF.	LOUISVILLE, KY.	MIAMI, FLORIDA	MILWAUKEE, WIS.	MINNEAPOLIS, MINN.	NASHVILLE, TENN.	NEW ORLEANS, LA.	NEW YORK, N. Y.	NORFOLK, VA.	PHILADELPHIA, PA.	PHOENIX, ARIZONA	PITTSBURGH, PA.	ST. LOUIS, MO.	SALT LAKE CITY, UTAH	SAN FRANCISCO, CALIF.	SEATTLE, WASHINGTON	WASHINGTON, D. C.	WILMINGTON, N. C.
ATLANTA, GEORGIA		140	1244	937	697	353	1229	587	554	194	721	1212	739	596	1291	1697	701	426	285	676	456	1936	319	604	668	907	214	424	748	505	666	1592	521	467	1583	2139	2182	543	371
BIRMINGHAM, ALA.	140		1174	1052	776	442	1119	578	618	334	581	1095	670	641	1152	1602	567	433	374	579	325	1802	331	665	659	862	182	312	864	638	783	1456	608	400	1466	2013	2082	661	512
BISMARCK, N. D.	1244	1174		1489	1106	1133	440	734	1014	1359	990	531	506	926	1081	534	1211	881	1529	618	943	1267	965	1838	682	384	1030	1297	1396	1430	1367	1095	1127	779	694	1265	1013	1318	1474
BOSTON, MASS.	937	1052	1489		400	622	1735	851	551	791	1551	1769	1159	613	2072	2024	1605	807	1017	1251	1259	2596	826	1255	857	1123	943	1359	188	471	271	2300	483	1038	2099	2699	2493	393	673
BUFFALO, NEW YORK	697	776	1106	400		344	1335	454	173	623	1198	1370	760	216	1692	1640	1286	435	879	861	913	2198	483	1181	458	731	627	1086	292	947	279	1906	178	662	1699	2300	2117	292	598
CHARLESTON, W. VA.	353	442	1133	622	344		1246	400	217	302	935	1256	673	284	1475	1642	984	262	553	701	642	2054	225	870	461	755	322	754	440	311	365	1733	168	465	1616	2205	2132	253	350
CHEYENNE, WYOMING.	1229	1119	440	1735	1335	1246		891	1199	1390	726	96	583	1125	653	521	947	986	1493	560	813	882	1033	1763	878	642	1032	1131	1604	1556	1556	663	1298	795	371	967	973	1477	1540
CHICAGO, ILLINOIS	587	578	734	851	454	400	891		308	652	803	920	309	238	1252	1248	940	165	863	414	552	1745	269	1188	81	355	397	833	713	699	666	1453	410	262	1260	1858	1737	597	745
CLEVELAND, OHIO	554	618	1014	551	173	217	1199	308		518	1025	1227	617	90	1525	1541	1114	263	770	700	740	2049	311	1087	335	630	459	924	405	432	360	1749	115	492	1568	2166	2026	306	541
COLUMBIA, S. C.	194	334	1359	791	623	302	1390	652	518		914	1380	863	585	1484	1837	891	489	256	830	644	2123	395	569	726	998	358	599	605	332	523	1781	448	603	1751	2317	2326	405	178
DALLAS, TEXAS	721	581	990	1551	1198	935	726	803	1025	914		663	632	999	572	1247	225	763	908	451	293	1240	726	1111	857	862	617	443	1374	1196	1299	887	1070	547	999	1483	1681	1185	1091
DENVER, COLORADO	1212	1095	531	1769	1370	1256	96	920	1227	1380	663		610	1156	557	591	879	1000	1467	558	780	831	1038	1726	914	700	1023	1082	1631	1566	1579	586	1320	796	371	949	1021	1494	1537
DES MOINES, IOWA	739	670	506	1159	760	673	583	309	617	863	632	610		546	983	977	821	411	1023	180	478	1438	476	1333	309	235	525	827	1022	983	973	1155	715	273	953	1550	1467	896	993
DETROIT, MICHIGAN	596	641	926	613	216	284	1125	238	90	585	999	1156	546		1479	1455	1105	240	831	645	723	1983	316	1152	252	543	470	939	482	522	443	1690	205	455	1492	2091	1938	396	623
EL PASO, TEXAS	1291	1152	1081	2072	1692	1475	653	1252	1525	1484	572	557	983	1479		1065	676	1264	1473	839	847	701	1254	1643	1279	1157	1169	983	1905	1755	1836	346	1590	1034	689	995	1376	1728	1661
HELENA, MONTANA	1697	1602	534	2024	1640	1642	521	1248	1541	1837	1247	591	977	1455	1065		1467	1382	1973	1023	1315	924	1453	2260	1206	912	1488	1646	1929	1947	1897	907	1652	1236	403	807	490	1842	1969
HOUSTON, TEXAS	701	567	1211	1605	1286	984	947	940	1114	891	225	879	821	1105	676	1467		865	821	644	388	1374	803	968	1005	1056	665	318	1420	1204	1341	1017	1137	679	1200	1645	1891	1220	1066
INDIANAPOLIS, IND.	426	433	881	807	435	262	986	165	263	489	763	1000	411	240	1264	1382	865		699	453	483	1809	107	1024	243	511	251	712	646	573	585	1499	330	231	1356	1949	1872	494	593
JACKSONVILLE, FLA.	285	374	1529	1017	879	553	1493	863	770	256	908	1467	1023	831	1473	1973	821	699		950	690	2147	594	326	942	1191	499	504	838	546	758	1794	703	751	1837	2374	2455	647	346
KANSAS CITY, MISSOURI	676	579	618	1251	861	701	560	414	700	830	451	558	180	645	839	1023	644	453	950		325	1356	480	1241	443	413	473	680	1097	1009	1038	1049	781	238	925	1506	1506	945	981
LITTLE ROCK, ARK.	456	325	943	1259	913	642	813	552	740	644	293	780	478	723	847	1315	388	483	690	325		1480	435	949	618	708	325	355	1081	909	1007	1137	779	291	1148	1688	1785	892	818
LOS ANGELES, CALIF.	1936	1802	1267	2596	2198	2054	882	1745	2049	2123	1240	831	1438	1983	701	924	1374	1809	2147	1356	1480		1829	2339	1744	1524	1780	1673	2451	2355	2394	357	2136	1589	579	347	959	2300	2294
LOUISVILLE, KY.	319	331	965	826	483	225	1033	269	311	395	726	1038	476	316	1254	1453	803	107	594	480	435	1829		919	349	605	154	623	652	529	582	1508	344	242	1402	1986	1943	476	516
MIAMI, FLORIDA	604	665	1838	1255	1181	870	1763	1188	1087	569	1111	1726	1333	1152	1643	2260	968	1024	326	1241	949	2339	919		1267	1511	815	669	1092	797	1019	1982	1010	1061	2089	2594	2734	923	598
MILWAUKEE, WIS.	668	659	682	857	458	461	878	81	335	726	357	914	309	252	1279	1206	1005	243	942	443	618	1744	349	1267		299	478	910	733	749	694	1464	446	327	1242	1842	1692	637	810
MINNEAPOLIS, MINN.	907	862	384	1123	731	755	642	355	630	998	862	700	235	543	1157	912	1056	511	1191	413	708	1524	605	1511	299		697	1051	1018	1047	985	1280	743	466	987	1584	1395	934	1100
NASHVILLE, TENN.	214	182	1030	943	627	322	1032	397	459	358	617	1023	525	470	1169	1488	665	251	499	473	325	1780	154	815	478	697		469	761	586	685	1446	472	254	1393	1963	1975	569	517
NEW ORLEANS, LA.	424	312	1297	1359	1086	754	1131	833	924	599	443	1082	827	939	983	1646	318	712	504	680	355	1673	623	669	910	1051	469		1171	926	1089	1316	919	598	1434	1926	2101	966	769
NEW YORK, N. Y.	748	864	1396	188	292	440	1604	713	405	605	1374	1631	1022	482	1905	1929	1420	646	838	1097	1081	2451	652	1092	733	1018	761	1171		296	83	2145	317	875	1972	2571	2408	205	499
NORFOLK, VA.	505	638	1430	471	438	311	1556	699	432	332	1196	1566	983	522	1755	1947	1204	573	546	1009	909	2355	529	797	749	1047	586	926	296		222	2028	318	771	1927	2515	2436	146	203
PHILADELPHIA, PA.	666	783	1367	271	279	365	1556	666	360	523	1299	1579	973	443	1836	1897	1341	585	758	1038	1007	2394	582	1019	694	985	685	1089	83	222		2083	259	811	1925	2523	2380	123	423
PHOENIX, ARIZONA	1592	1456	1095	2300	1906	1733	663	1453	1749	1781	887	586	1155	1690	346	907	1017	1499	1794	1049	1137	357	1508	1982	1464	1280	1446	1316	2145	2028	2083		1828	1272	504	653	1114	1983	1954
PITTSBURGH, PA.	521	608	1127	483	178	168	1298	410	115	448	1070	1320	715	205	1590	1652	1137	330	703	781	779	2136	344	1010	446	743	472	919	317	318	259	1828		559	1668	2264	2138	192	442
ST. LOUIS, MO.	467	400	779	1038	662	465	795	262	492	603	547	796	273	455	1034	1236	679	231	751	238	291	1589	242	1061	327	466	254	598	875	771	811	1272	559		1162	1744	1724	712	746
SALT LAKE CITY, UTAH	1583	1466	694	2099	1699	1616	371	1260	1568	1751	999	371	953	1492	689	403	1200	1356	1837	925	1148	579	1402	2089	1242	987	1393	1434	1972	1927	192								



# ARRL Phonetic Alphabet

<b>A</b>	ADAM
<b>B</b>	BAKER
<b>C</b>	CHARLIE
<b>D</b>	DAVID
<b>E</b>	EDWARD
<b>F</b>	FRANK
<b>G</b>	GEORGE
<b>H</b>	HENRY
<b>I</b>	IDA
<b>J</b>	JOHN
<b>K</b>	KING
<b>L</b>	LEWIS
<b>M</b>	MARY
<b>N</b>	NANCY
<b>O</b>	OTTO
<b>P</b>	PETER
<b>Q</b>	QUEEN
<b>R</b>	ROBERT
<b>S</b>	SUSAN
<b>T</b>	THOMAS
<b>U</b>	UNION
<b>V</b>	VICTOR
<b>W</b>	WILLIAM
<b>X</b>	X-RAY
<b>Y</b>	YOUNG
<b>Z</b>	ZEBRA

## ON GOOD PHONE OPERATING

1. *Listen much . . . with care.* Avoid distractions in your operating room. Tune the band well after each call.
2. *Time your calls; monitor your own frequency.* Call only when a station is free.
3. *Make short calls, with breaks to listen.* Speak clearly, at a steady, modest rate. Three short calls are better than one long one.
4. *Use push-to-talk technique . . . speak near the mike.* Watch the modulation indicator. Keep local background noise at a minimum.
5. *Make notes.* Avoid missing points for comment. Jot down topics to avoid repeats.
6. *Talk in connected thoughts and phrases.* Notes will help avoid mixing up subjects. Push-to-talk technique will keep brother amateurs from calling you a monologist.
7. *Speak naturally.* QSOs need not be cut and dried. Make them interesting. Avoid exhibitionism. Use proper operating form to promote efficiency in communication and add respect and prestige for your station.

Use of this standard list is recommended by ARRL. Haphazard selection of words often results in confusion. A degree of uniformity in use of phonetic words reflects favorably on your individual operating, and on the whole amateur service.

ARRL Communications Department.

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hard rubber...



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# Great Circle Chart of the World Centered on THE UNITED STATES



To find the great circle bearing to any point in the world from the center of the United States, draw a straight line from the star and note the reading in degrees on the outer scale. The bar scale at the bottom of the chart can be used to determine the distance in statute miles. For bearings to the nearest degree reference is invited to the table on the opposite Page. The outlines of this chart were prepared by the U.S. Coast and Geodetic Survey.

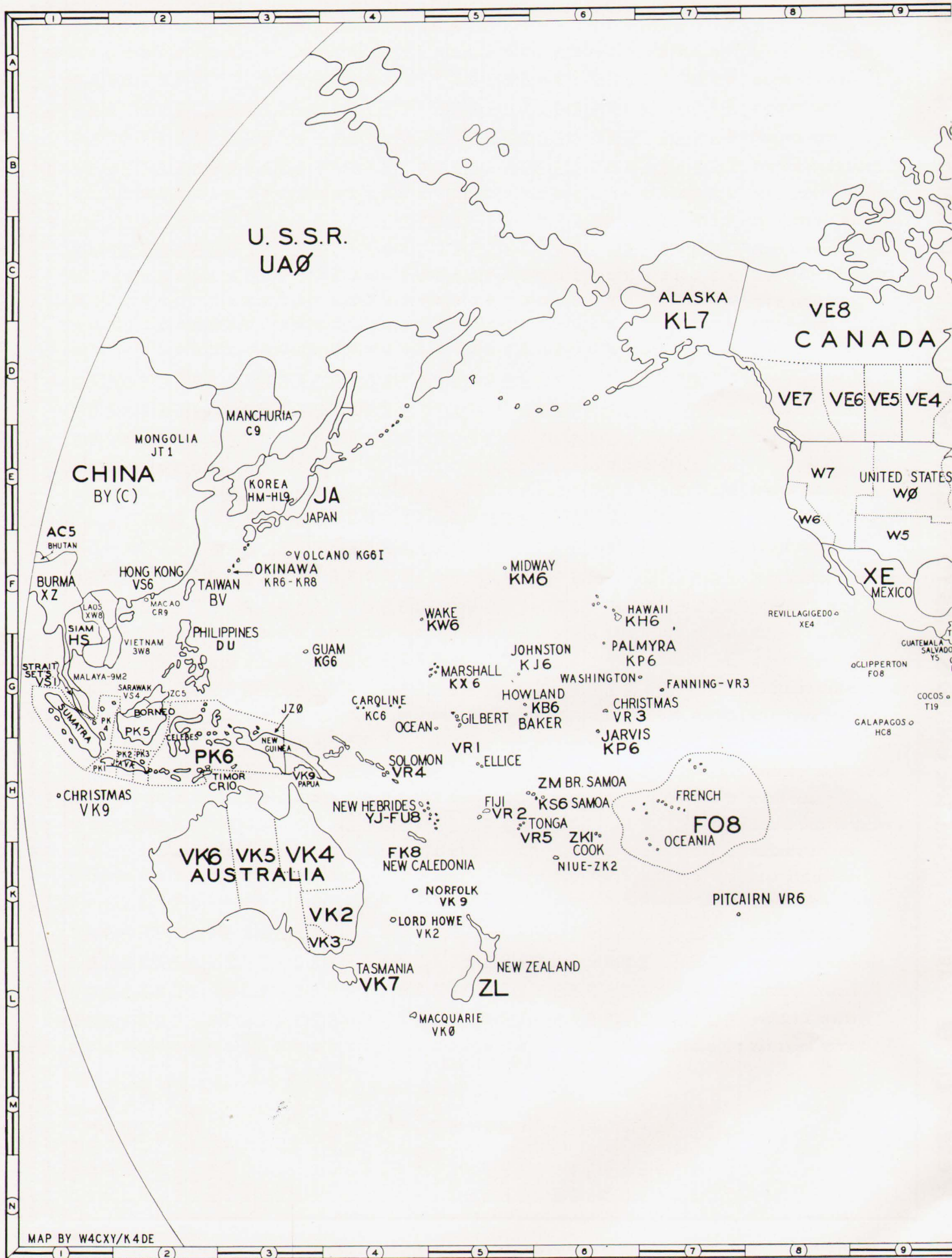


# GREAT CIRCLE BEARINGS FROM THE UNITED STATES TO VARIOUS WORLD WIDE METROPOLITAN AREAS

	AMSTERDAM, HOLLAND	ANCHORAGE, ALASKA	ASUNCION, PARAGUAY	AUCKLAND, NEW ZEALAND	BOGOTA, COLOMBIA	BOMBAY, INDIA	BERN, SWITZERLAND	BRUSSELS, BELGIUM	BUENOS AIRES, ARGENTINA	CAIRO, EGYPT	CAPETOWN, SOUTH AFRICA	CARACAS, VENEZUELA	COPENHAGEN, DENMARK	GUATEMALA CITY, GUATEMALA	HAVANA, CUBA	HELSINKI, FINLAND	HONOLULU, T. H.	JOHANNESBURG, SOUTH AFRICA	LA PAZ, BOLIVIA	LIMA, PERU	LONDON, ENGLAND	MADRID, SPAIN	MANILA, PHILIPPINE ISLANDS	MEXICO CITY, MEXICO	MONTEVIDEO, URUGUAY	MONTREAL, CANADA	OSLO, NORWAY	PARIS, FRANCE	PRAGUE, CZECHOSLOVAKIA	QUITO, ECUADOR	RIO DE JANEIRO, BRAZIL	ROME, ITALY	SAN JOSE, COSTA RICA	SANTIAGO, CHILE	SHANGHAI, CHINA	SINGAPORE, MALAYA	STOCKHOLM, SWEDEN	SYDNEY, AUSTRALIA	TOKYO, JAPAN
ATLANTA, GA.	43	325	153	242	160	26	48	45	158	51	114	141	38	198	170	30	280	102	160	170	45	58	329	227	156	32	34	47	42	170	139	51	179	168	336	346	33	254	324
BIRMINGHAM, ALA.	42	325	151	241	155	23	47	44	156	50	113	137	37	191	158	29	279	101	157	167	44	57	327	221	154	36	33	47	42	165	137	50	173	166	334	342	32	253	323
BISMARCK, N. D.	42	315	141	240	143	7	45	43	146	40	97	131	35	162	142	27	261	81	146	154	45	56	317	177	145	84	33	46	39	151	129	46	153	155	325	328	30	256	314
BOSTON, MASS.	51	321	167	253	186	36	56	53	169	60	117	172	45	217	210	36	284	105	177	187	53	68	346	235	168	331	40	56	50	191	153	59	205	181	349	7	39	270	335
BUFFALO, N. Y.	49	320	160	250	172	29	53	51	163	55	112	159	42	203	189	34	279	99	168	178	51	65	338	222	161	54	38	53	47	179	146	56	189	173	342	356	37	266	329
CHARLESTON, W. VA.	46	322	156	246	167	28	50	47	160	53	113	151	40	201	183	32	279	101	164	174	48	61	334	224	159	37	36	50	45	175	143	53	185	170	339	351	35	259	327
CHEYENNE, WYO.	38	322	138	236	135	3	41	40	143	37	100	122	32	151	127	24	263	84	141	148	41	52	312	166	142	69	30	42	36	143	126	42	144	152	322	321	27	250	312
CHICAGO, ILL.	45	320	152	245	158	21	49	47	156	49	108	144	39	186	165	31	274	95	158	167	48	60	328	207	154	66	36	50	44	167	138	51	173	166	335	343	34	260	323
CLEVELAND, OHIO	47	320	157	247	167	27	52	49	161	53	111	153	41	198	182	33	278	99	165	174	50	63	334	219	159	53	37	52	46	175	143	54	184	171	340	352	36	263	327
COLUMBIA, S. C.	44	324	156	243	166	29	49	46	161	53	115	148	39	206	186	31	281	103	164	175	46	59	333	232	159	24	35	48	44	175	142	52	187	171	339	352	34	255	327
DALLAS, TEXAS	39	326	142	237	138	12	43	41	148	44	110	122	34	161	123	26	274	97	146	154	42	53	317	189	147	48	31	43	38	149	130	45	150	157	326	326	29	249	317
DENVER, COLORADO	38	323	137	235	133	2	41	39	143	37	101	120	32	149	124	24	264	85	141	147	41	52	312	164	142	66	29	42	35	142	125	42	142	152	321	320	27	249	312
DES MOINES, IOWA	43	320	146	242	149	15	47	44	151	45	105	135	37	173	149	28	270	90	152	160	46	58	323	194	150	68	34	47	41	158	134	48	162	161	330	335	32	256	319
DETROIT, MICH.	47	320	156	247	166	25	51	49	160	52	110	151	41	195	178	32	277	97	163	173	50	63	333	216	159	62	37	52	46	173	142	54	182	169	339	350	35	263	326
EL PASO, TEXAS	36	329	135	233	125	1	39	37	142	37	108	111	30	136	106	22	270	94	137	142	38	49	308	150	140	52	27	40	34	135	124	41	131	149	319	313	25	245	312
HELENA, MONTANA	36	318	133	233	130	355	39	38	138	31	89	119	30	144	124	22	252	71	136	142	39	49	308	154	137	78	28	40	33	138	121	39	138	147	317	316	25	249	307
HOUSTON, TEXAS	39	328	143	237	137	15	43	41	149	45	113	120	34	162	116	26	277	100	147	154	41	53	317	199	147	41	30	43	38	149	130	46	150	158	327	326	29	247	318
INDIANAPOLIS, IND.	45	321	153	244	160	23	49	47	157	50	110	144	39	190	168	31	276	97	160	169	47	60	329	212	155	54	35	49	43	168	139	52	176	167	336	345	34	259	324
JACKSONVILLE, FLA.	42	326	155	242	163	30	48	44	160	53	117	142	37	209	185	30	283	105	163	173	44	57	331	239	158	20	33	47	42	174	141	51	187	170	338	350	33	251	326
KANSAS CITY, MO.	42	322	145	240	146	14	45	43	151	45	107	132	36	171	143	28	271	93	151	159	44	56	321	193	149	61	33	46	40	156	133	47	159	160	329	333	31	254	319
LITTLE ROCK, ARK.	41	325	146	240	147	17	45	43	152	47	111	130	36	175	141	28	275	98	152	160	43	56	322	203	150	47	32	45	40	157	134	48	161	161	330	334	31	252	320
LOS ANGELES, CALIF.	31	333	127	228	116	347	34	33	135	28	102	104	26	121	100	18	260	84	128	132	34	44	300	126	134	58	24	35	28	124	117	34	119	141	312	303	21	241	306
LOUISVILLE, KY.	44	322	153	244	160	23	49	46	157	50	111	144	39	191	168	30	277	98	160	169	47	60	329	215	156	47	35	49	43	168	139	51	176	167	336	345	33	257	324
MIAMI, FLORIDA	41	328	155	240	163	33	47	43	160	54	118	138	37	223	217	30	285	108	163	175	43	56	331	254	158	13	33	46	42	176	140	50	194	171	339	351	32	247	327
MILWAUKEE, WIS.	45	319	152	245	158	20	50	47	156	49	107	145	39	185	165	31	273	94	158	167	48	61	328	205	154	72	36	50	44	166	138	52	173	165	335	343	34	261	323
MINNEAPOLIS, MINN.	44	317	147	243	152	15	48	46	152	46	103	139	38	175	154	29	270	90	153	161	47	59	324	193	150	81	35	49	42	160	134	49	164	161	331	337	33	259	319
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NEW YORK, N. Y.	49	321	164	251	180	34	54	51	167	58	116	166	43	214	204	35	283	104	173	184	51	66	343	233	165	4	39	54	48	187	150	57	199	177	346	3	38	266	333
NORFOLK, VA.	46	323	161	247	176	33	51	48	165	56	116	160	41	213	203	33	283	104	170	181	48	62	339	235	163	12	36	51	46	184	147	55	197	175	344	0	36	260	331
PHILADELPHIA, PA.	48	322	163	249	178	33	53	50	166	57	115	164	42	212	202	34	282	103	172	182	50	65	341	232	164	11	38	53	48	185	149	56	197	176	345	2	37	264	332
PHOENIX, ARIZONA	34	330	131	231	121	354	37	35	138	33	105	108	28	129	104	20	265	89	133	138	36	47	304	137	137	56	26	38	31	130	121	38	126	146	316	308	23	243	309
PITTSBURGH, PA.	47	321	158	247	170	29	52	49	162	54	113	155	41	203	187	33	279	100	167	176	49	63	336	224	160	41	37	52	46	178	145	55	188	172	341	354	36	262	329
ST. LOUIS, MO.	43	322	149	242	153	19	47	45	154	48	109	137	37	181	156	29	274	96	155	164	46	58	325	204	152	55	34	47	42	162	136	49	167	163	332	339	32	256	321
SALT LAKE CITY, UTAH	35	325	132	232	127	355	38	36	139	32	96	114	29	138	116	21	258	79	135	141	38	48	307	149	136	67	27	39	32	135	121	38	134	146	317	313	24	247	308
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SEATTLE, WASHINGTON	31	321	125	227	120	345	33	32	131	23	79	110	25	131	113	17	240	58	128	133	34	43	300	138	130	75	24	35	27	128	113	32	127	139	309	306	20	243	301
WASHINGTON, D. C.	47	322	161	248	175	32	52	49	164	56	115	160	41	210	198	33	282	103	170	180	49	63	339	231	163	20	37	52	47	182	147	55	194						



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THE WORLD  
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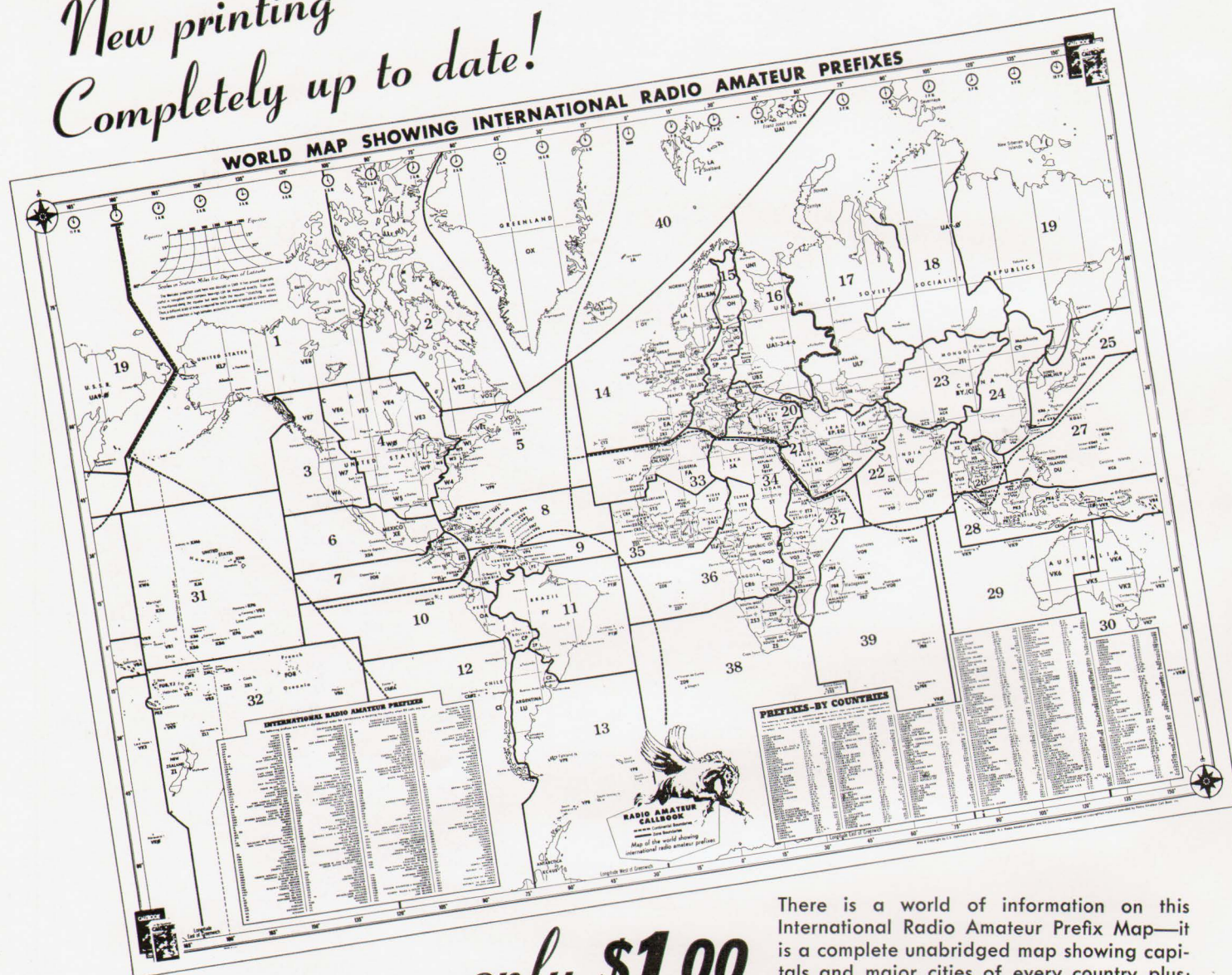
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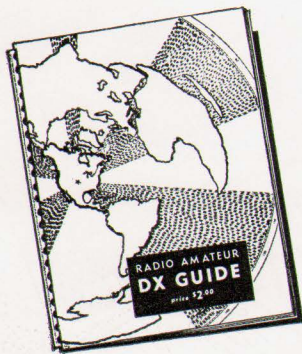
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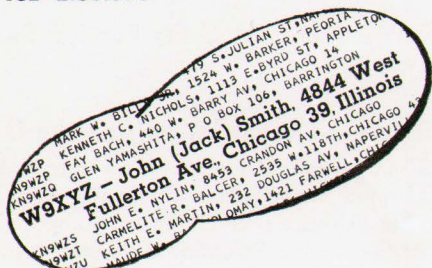
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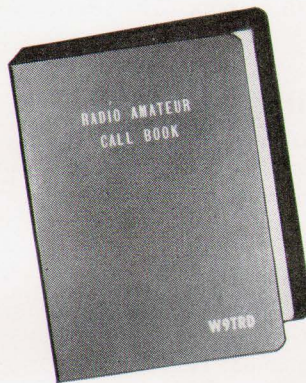
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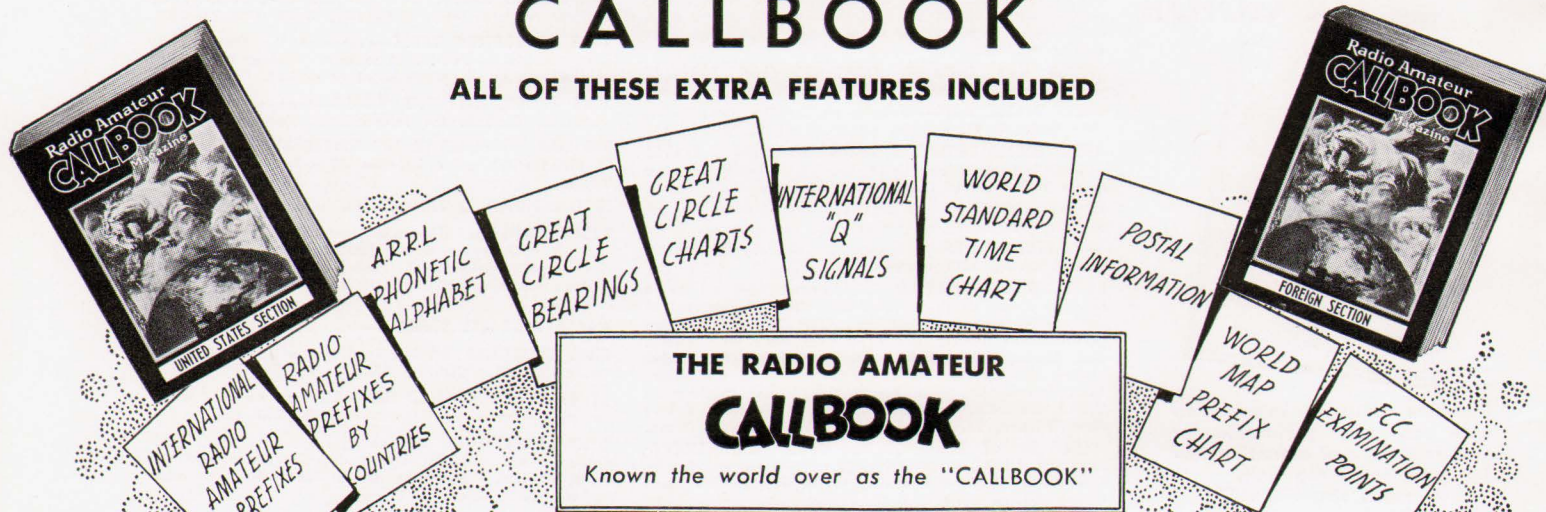
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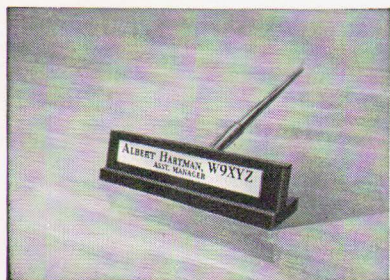
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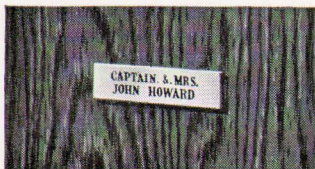


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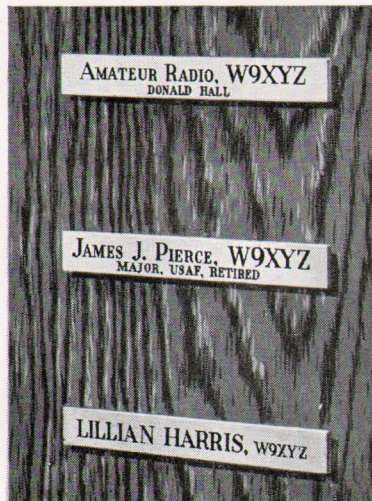
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Most of us have heard or read about the famous winged horse of Greek mythology that appeared through magic. Flying across the heavens, hoofs flashing, Pegasus brought the thunder and lightning. Of course this is a myth but

Pegasus lives on . . . . . in the spirit of adventure—and where could we find more adventure than in the magic of radio, circling the globe extending friendship to everyone. For this reason we have adopted Pegasus from the cover of the CALLBOOK (by permission) to portray in our design the symbol of adventure in amateur radio.

## Exclusive RADIO AMATEUR EMBLEM JEWELRY

Designed and personalized especially for radio amateurs by the finest craftsmen available . . . of heirloom quality—our Radio Amateur Emblem jewelry will please the most discriminating.

Available in either 20K gold plate or rhodium plate (non-tarnishing silver-like finish) and inlaid in black to enhance the fine detail of design. The item you select will be engraved with the call letters you specify. Quality and workmanship guaranteed.

An additional feature is the "if found" legend inscribed on the reverse side of each piece.

Radio Amateur Emblem jewelry—a truly distinctive gift to give or receive.

## Handy Order Form for Jewelry

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Item No.	Quantity ordered	Name of article	Engrave Call letters	Gold or Rhodium?	Price Each	Federal Tax	Total

Total Amount \$ \_\_\_\_\_

Illinois residents only add 4%  
 retailers' occupational tax \_\_\_\_\_

Amount enclosed \$ \_\_\_\_\_

Name \_\_\_\_\_

Address \_\_\_\_\_

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RFD

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